

EXHIBIT 1

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571-272-7822

#: 5496

Paper 27

Date: December 16, 2025

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FREIGHTCAR AMERICA, INC.,
Petitioner,

v.

NATIONAL STEEL CAR LIMITED,
Patent Owner.

IPR2025-01046
Patent 8,166,892 B2

Before HYUN J. JUNG, NEIL T. POWELL, and
RICHARD H. MARSCHALL, *Administrative Patent Judges*.

POWELL, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

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I. INTRODUCTION

A. BACKGROUND

FreightCar America, Inc. (“Petitioner”) filed a Petition for *inter partes* review of claims 1–15 of U.S. Patent No. 8,166,892 B2 (Ex. 1001, “the ’892 patent”). Paper 1 (“Pet.”). National Steel Car Limited (“Patent Owner”) filed a Preliminary Response. Paper 10 (“Prelim. Resp.”). We authorized Petitioner to file a Preliminary Reply and Patent Owner to file a Preliminary Sur-Reply. Paper 18 (“Prelim. Reply”); Paper 22 (“Prelim. Sur-reply”).

After the Petition was filed, Patent Owner statutorily disclaimed claim 1 of the ’892 patent. Prelim. Sur-reply 2; Ex. 2046.

We have authority to determine whether to institute an *inter partes* review. *See* 35 U.S.C. § 314; 37 C.F.R. § 42.4(a). To institute an *inter partes* review, we must determine that the information presented in the Petition and the Preliminary Response shows “a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). For the reasons set forth below, we determine that there is a reasonable likelihood that Petitioner will prevail with respect to at least one challenged claim. We institute an *inter partes* review of claims 2–15 based on the Petition’s grounds challenging those claims.

B. RELATED PROCEEDINGS

The parties identify *National Steel Car Limited v. FreightCar America, Inc.*, 1:24-cv-00594-JLH (D. Del.) as a related matter. Pet. 131–32; Paper 3, 2. Patent Owner also identifies IPR2025-01047 and IPR2025-01048. Paper 3, 2.

C. THE '892 PATENT

The '892 patent relates to railroad freight cars. Ex. 1001, 1:14. In particular, the '892 patent discusses cars with an upper opening for loading particulate matter and a lower door for releasing the particulate matter. *Id.* at 1:22–26. The '892 patent shows an embodiment of such a car in Figure 1, which is reproduced below.

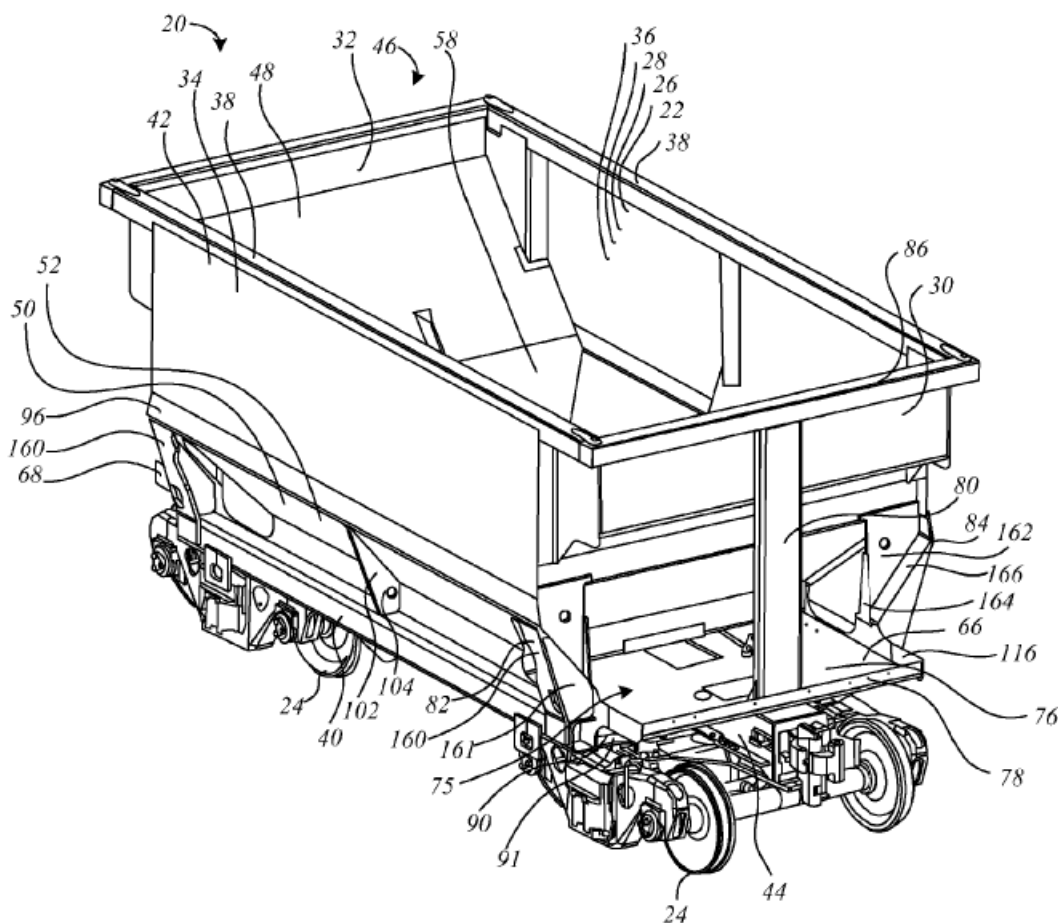


Figure 1

Figure 1 shows an isometric view of rail road freight car 20, which “may be a hopper car such as may be used for the carriage of bulk commodities in the form of a granular particulate.” *Id.* at 12:29–30, 12:40–42. Freight car 20 includes “a car body 22 that is carried on trucks 24 for rolling operation along railroad tracks.” *Id.* at 12:50–52.

Car body 22 includes cross-wise first and second end walls 30, 32, lengthwise first and second side walls 34, 36, and “top chords 38 running along the top of the walls.” Ex. 1001, 12:66–13:6. The ’892 patent shows certain details of sidewalls 34, 36 in Figure 2c, which is reproduced below.

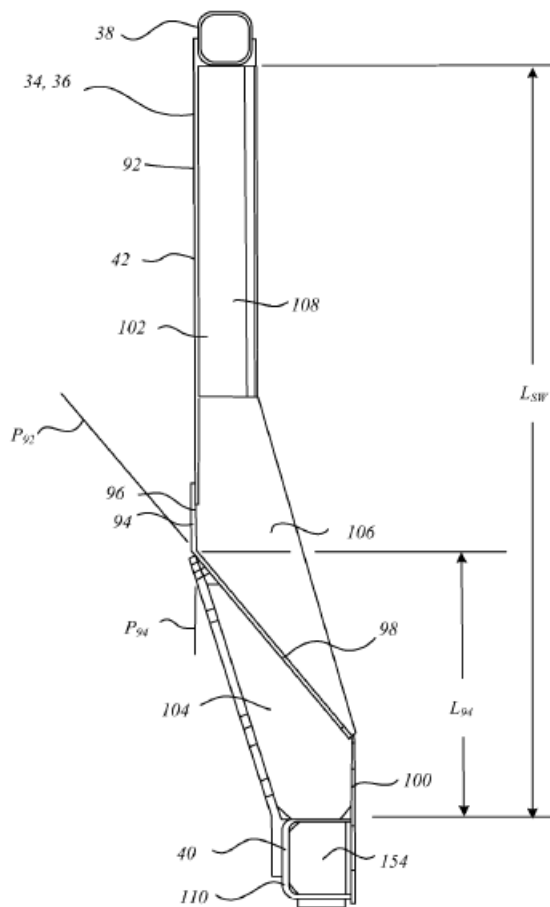


Figure 2c

Figure 2c is an end view that “show[s] the sidewall of the car, indicated generally as 34 or 36.” *Id.* at 10:50, 15:1–2.

The sidewall includes side sheet assembly 42. Ex. 1001, 15:4–9. Side sheet assembly 42 includes upper member 92 and lower member 94.

Id. at 15:9–13. Lower member 94 includes three portions:

an upper flange or leg or margin 96 that extends in a substantially vertical plane . . . ; a second or intermediate portion 98 that runs in an inclined plane sloping inwardly and downwardly . . . and a

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third or bottom portion, namely bottom flange, or leg, or margin 100 that extends in a substantially vertical plane downwardly.

Id. at 15:13–21.

The sidewall “also includes a central post, or web stiffener, 102 that has a lowermost first portion 104[,] an intermediate second portion 106, and an uppermost third portion 108.” Ex. 1001, 15:21–24. Portion 104 “stands outboard of the sidewall sheet.” *Id.* at 15:32–33. Portion 104 has an edge welded to sloping portion 98 of lower portion 94 of side sheet assembly 42. *Id.* at 15:27–31. Portion 108 “extends downwardly from, the underside of top chord 38 along the inside face of vertical web portion 92.”

Id. at 15:34–36. Intermediate portion 106 is welded to portion 108’s lower margin and member 94’s sloped portion 98. *Id.* at 15:36–42. “Portions 104 and 106 are co-planar, or substantially co-planar, such that stiffener 102 has web continuity through member 94.” *Id.* at 15:44–46. The construction shown in Figure 2c “presents a continuous sloped surface for containing, and then slidingly discharging, particulate lading”:

the web of the sidewall traverses the sidewall stiffener, commencing on its inboard margin at side sill 40, traverses the web mid-way up the post, and ends along its outboard margin at top chord 38. In this arrangement, the vertical stiffener, 102, acts as the web of a T-section, and the local region of the wall section to which it is joined functions as the flange of that T-section.

Id. at 15:44–57.

For holding and releasing particulate lading, rail car 20 has moveable doors, as shown below in Figure 4a. Ex. 1001, 10:57–59, 13:20–24, 13:55–58, 18:1–2, 18:25–29.

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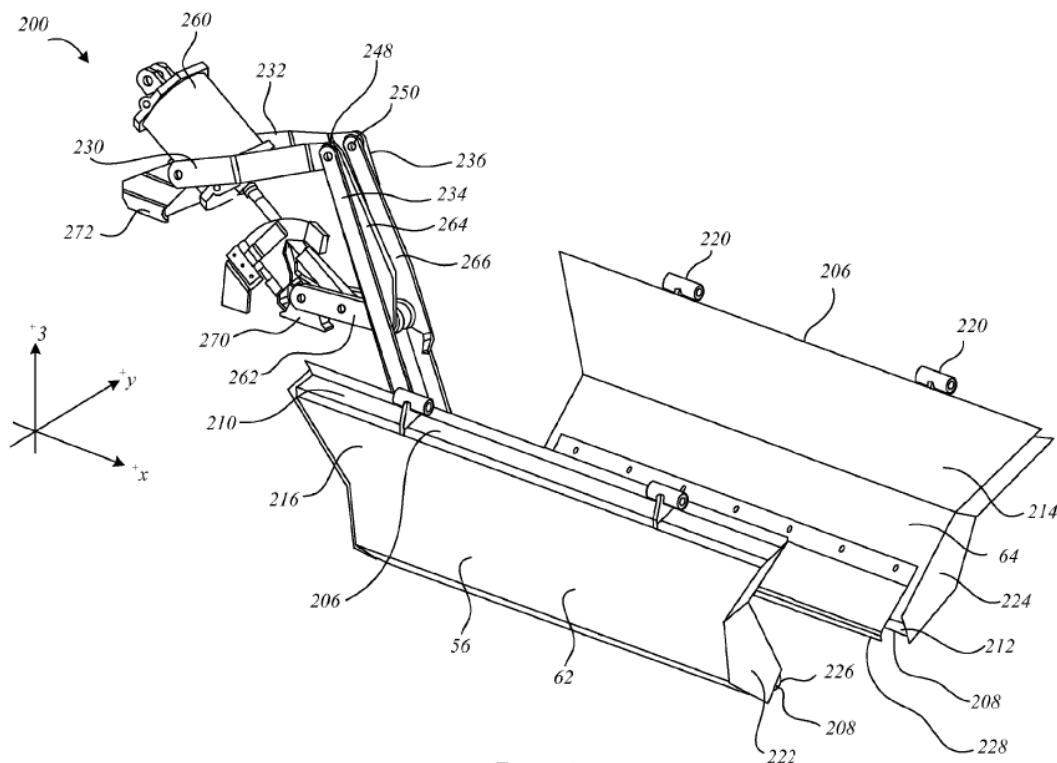


Figure 4a

Figure 4a provides an “isometric view of a portion of the door opening mechanism for the railroad car of [Figure] 1 in a fully open position.”

Id. at 10:57–59.

Specifically, Figure 4a shows door opening mechanism 200, which includes first and second doors 62, 64, actuator 260, and various links for lifting doors 62, 64. Ex. 1001, 18:1–2, 18:18–29, 19:4–5. Doors 62, 64 move in circular arcs about “hinge axes of their respective hinges 220.” *Id.* at 18:29–33. Door actuator 260 provides the system’s driving force. *Id.* at 19:4–5.

The ’892 patent shows end wall 30 in detail in Figure 3a, which is reproduced below.

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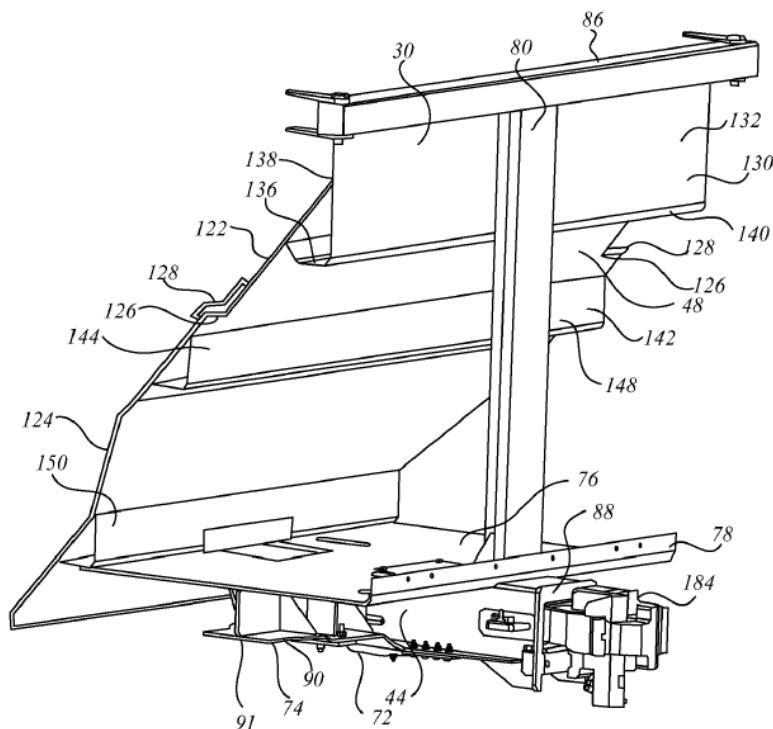


Figure 3a

Figure 3a “shows a perspective view of the end structure of the railroad freight car of [Figure] 1.” *Id.* at 10:51–52.

As shown in Figure 3a, end wall 30 has “upper and lower sloped surface members 122 and 124.” Ex. 1001, 16:29–30. “[A] substantially triangular closed section defin[es] a laterally extending end slope sheet reinforcement beam,” as follows:

At the upper end of end wall 30 the end wall assembly includes a laterally extending first formed member 130 that has a first, vertical leg 132 that laps the inside face of the top chord 86, and a bent flange 136 that extends initially horizontally, with a distal lip bent upward to mate perpendicularly with the upper margin 138 of the end slope sheet 48. The distal tip of end slope sheet 48 is fillet welded to vertical leg 132.

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Id. at 16:36–45.

D. ILLUSTRATIVE CLAIMS

Of the challenged claims remaining after Patent Owner's disclaimer of claim 1, only claim 2 is independent. Each of claims 3–15 depends, directly or indirectly, from independent claim 2. Claim 2 is illustrative for our analysis herein and is reproduced below with certain reformatting:¹

2. [2a] A rail road hopper car comprising:

a hopper carried between a first end section and a second end section;

said first and second end sections being carried by respective first and second trucks for rolling motion in a longitudinal direction along railroad tracks;

[2b] said hopper having first and second upstanding sidewalls running lengthwise therealong;

[2c] said hopper having a lower discharge and convergent slope sheets that slope downward toward said discharge;

[2d] said discharge having a door movable between a closed position and an open position to govern egress of lading from said hopper;

[2e] one of said convergent slope sheets being a first end slope sheet;

said first end slope sheet extending laterally between said first and second upstanding sidewalls;

said first end slope sheet having a first, lower, longitudinally inboard end proximate said discharge, and a second, upper, longitudinally outboard end distant from said discharge;

[2f] said first end section having a first draft sill and a main bolster extending cross-wise to said first draft sill, said first draft sill and said main bolster intersecting at a first

¹ We have added the same labels that Petitioner uses to identify portions of claim 2. *See, e.g.*, Pet. 2–5.

truck center, said first truck being located centrally under said first truck center;

[2g] said draft sill having a striker longitudinally outboard of said first truck center;

[2h] said first end section having a shear plate mounted overtop of said first draft sill and said main bolster;

said shear plate having a longitudinally inboard margin adjacent to said longitudinally inboard end of said first end slope sheet;

said shear plate having a longitudinally outboard cross-wise running margin traversing said draft sill longitudinally outboard of said truck center;

[2i] said upper, longitudinally outboard end of said first end slope sheet being reinforced by a first cross-wise extending beam;

[2j] said lower, longitudinally inboard end of said first end slope sheet being reinforced by a second cross-wise extending beam;

[2k] said first end slope sheet overhanging said shear plate;

[2l] a door actuator mounted above said shear plate, said door actuator being at least partially overhung by said first end slope sheet;

said door actuator being connected to said door by a mechanical transmission;

[2m] said first end section being free of longitudinally oriented elephant ears extending between said draft sill and said first end slope sheet;

[2n] said hopper having respective first and second top chords running longitudinally therealong;

said car having respective first and second side sills running longitudinally between said first and second end sections;

[2o] said first upstanding sidewall having a predominantly upwardly running sidewall stiffener mounted thereto, said

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sidewall stiffener being located at a longitudinal station intermediate the trucks;

[2p] said first upstanding sidewall having a first region, said first region being a lower region thereof;

said first upstanding sidewall having a second region, said second region being an upper region thereof;

[2q] said first and second regions of said sidewall adjoining each other at a height intermediate said first side sill and said first top chord;

said second region of said sidewall extending downwardly or said first top chord;

said first region of said sidewall extending downwardly and laterally inboard from said second region of said sidewall;

[2r] said sidewall stiffener having a first portion, said first portion being a lower portion thereof, said first portion being mounted to said first region of said first upstanding sidewall;

said sidewall stiffener having a second portion, said second portion being an upper portion thereof, said second portion being mounted to said second region of said first upstanding sidewall;

[2s] said first portion of said first upstanding sidewall stiffener being laterally outboard of said first region of said first upstanding sidewall;

said second portion of said sidewall stiffener being laterally inboard of said second region of said first upstanding sidewall;

[2t] said first sidewall having a continuous section between said first and second regions thereof; and

[2u] said sidewall stiffener having web continuity between said first and second portions thereof.

Ex. 1001, 23:38–24:60.

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E. ASSERTED PRIOR ART AND PROFFERED TESTIMONIAL EVIDENCE

Petitioner identifies the following references as prior art in the asserted grounds of unpatentability:

Name	Reference	Exhibit
1946 Cyclopedia	1946 Car Builders' Cyclopedia, (Roy V. Wright ed., 17th ed., 1946)	1004, 1054 ²
Lindström	US 1,321,928, issued Nov. 18, 1919	1005
Wong	US 4,941,411, issued July 17, 1990	1006
Coates	Excerpts from <i>Lancashire & Yorkshire</i> , Vol. 2, Noel Coates, 2006.	1007

Petitioner also relies on a Declaration of Dr. Mehdi Ahmadian. Pet. 16–17; Ex. 1003. Patent Owner provides a Declaration of Mark J. Viz, Ph.D., P.E. Ex. 2035.

F. ASSERTED GROUNDS

The Petition asserted that claims 1–15 would have been unpatentable on the following grounds (Pet. 8):

Ground	Claims Challenged	35 U.S.C. § ³	References
1a ⁴	1	102(b), 103(a)	1946 Cyclopedia
1b	2–8, 10–14	103(a)	1946 Cyclopedia, Lindström, Wong
1c	9	103(a)	1946 Cyclopedia, Lindström, Wong
1d	15	103(a)	1946 Cyclopedia, Lindström, Wong, Coates

² As discussed below in Section II.C, Petitioner submitted a first copy of the 1946 Cyclopedia as Exhibit 1004 and a second, higher-resolution copy of the 1946 Cyclopedia as Exhibit 1054.

³ The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”) included revisions to 35 U.S.C. §§ 102, 103 that became effective on March 16, 2013. The ’892 patent has a filing date of September 14, 2009. Ex. 1001, code (22). Accordingly, we apply the pre-AIA version of §§ 102, 103.

⁴ Because Patent Owner statutorily disclaimed claim 1, this ground is moot.

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Ground	Claims Challenged	35 U.S.C. § ³	References
2a ⁵	1	102(b), 103(a)	Lindström, 1946 Cyclopedia
2b	2–14	103(a)	Lindström, 1946 Cyclopedia, Wong
2c	15	103(a)	Lindström, 1946 Cyclopedia, Wong, Coates

II. ANALYSIS

A. LEVEL OF ORDINARY SKILL

Petitioner contends that a person of ordinary skill in the art “would have had at least a bachelor’s degree in a discipline related to mechanical engineering, physics, structural design, or an equivalent discipline, and at least two years of experience designing or analyzing rail cars or similar vehicles.” Pet. 16 (citing Ex. 1003 ¶ 30).

Patent Owner responds that Petitioner’s proposed level of ordinary skill in the art is incorrect, “because design or analysis experience with other industrial wheeled vehicles would not necessarily be applicable to the art of the ’892 Patent.” Prelim. Resp. 12 (citing Ex. 2035 ¶¶ 38–39). According to Patent Owner, a person of ordinary skill in the art “would have at least a bachelor’s degree in a discipline related to mechanical engineering, physics, structural design, or an equivalent discipline, and at least two years of experience designing or analyzing rail cars.” *Id.* (citing Ex. 2035 ¶¶ 34, 38).

The parties agree that one of ordinary skill in the art “would have had at least a bachelor’s degree in a discipline related to mechanical engineering, physics, structural design, or an equivalent discipline, and at least two years

⁵ Because Patent Owner statutorily disclaimed claim 1, this ground is moot.

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of experience designing or analyzing rail cars.” Pet. 16; Prelim. Resp. 12. Patent Owner, however, disagrees that the experience should include designing or analyzing “similar vehicles.” Prelim. Resp. 12.

At this stage, for the reasons below, limiting the ordinary skill in the art to “at least two years of experience designing or analyzing rail cars” does not affect our analysis of the parties’ dispute or our determination that there is a reasonable likelihood that Petitioner would prevail with respect to at least one of the challenged claims. Thus, based on the preliminary record, we adopt Petitioner’s proposed level of ordinary skill to determine whether review should be instituted.

Patent Owner also argues that Petitioner’s declarant does not have “actual industry experience with railcar structures” and, thus, “makes the wrong conclusions and conflates various concepts that a [person of ordinary skill in the art] with practical industry experience and knowledge would not.” Prelim. Resp. 12–13 (citing Ex. 2035 ¶ 39). For the reasons discussed below, in our preliminary analysis, we give credit to the cited testimony of Petitioner’s declarant, because it finds support in the relied-upon portions of the record.

B. CLAIM CONSTRUCTION

In an *inter partes* review, the claims are construed

using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.

37 C.F.R. § 42.100(b); *see Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc).

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Petitioner proposes no interpretation for any claim term and contends that “[t]he challenged claims are unpatentable under any reasonable construction.” Pet. 16.

Patent Owner responds that, for its Preliminary Response, no construction is required to deny institution. Prelim. Resp. 14. Patent Owner contends ordinary and customary meaning in view of the Specification and prosecution history is sufficient. *Id.*

At this stage, we need not construe expressly any claim term to resolve the parties’ dispute regarding whether Petitioner has demonstrated a reasonable likelihood of prevailing on at least one challenged claim. *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms that . . . are in controversy, and only to the extent necessary to resolve the controversy.’”) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))

C. GENERAL DISPUTE REGARDING THE 1946 CYCLOPEDIA

In its Preliminary Response, Patent Owner suggested that the 1946 Cyclopedia lacks as much detail as shown in excerpts from the 1946 Cyclopedia included in the Petition and Dr. Ahmadian’s Declaration. Prelim. Resp. 20–21. In response to this, Petitioner filed an authorized Motion to Correct Exhibit 1004, providing evidence that the copy of the 1946 Cyclopedia in Exhibit 1004 suffered from poor resolution due to a clerical error. Paper 17 (“Motion”). We granted Petitioner’s Motion, ordering Petitioner to file a higher-resolution copy of the 1946 Cyclopedia. Paper 24 (“Order”). Pursuant to our Order, Petitioner has filed a higher-resolution copy of the 1946 Cyclopedia as Exhibit 1054. As noted in our Order, if Patent Owner has evidentiary concerns regarding the newly filed copy of the 1946 Cyclopedia, Patent Owner may address those during trial,

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such as by objecting and moving to exclude Exhibit 1054. *Id.* at 7. Otherwise, Exhibit 1054 appears to remedy the concerns underpinning Patent Owner's argument that the 1946 Cyclopedia lacks the details shown in the Petition and Dr. Ahmadian's declaration. As noted in our Order, all citations to Exhibit 1004 in documents currently of record shall be treated as also citing to Exhibit 1054. *Id.* at 8.

D. GROUND 1B—ALLEGED OBVIOUSNESS OVER THE 1946 CYCLOPEDIA, LINDSTRÖM, AND WONG

1. Overview of the 1946 Cyclopedia

The 1946 Cyclopedia has "Definitions and Typical Illustrations of Railroad and Industrial Cars, Their Parts and Equipment." Ex. 1004, 2; Ex. 1054, 2. Figure 2,670 of the 1946 Cyclopedia is reproduced below.

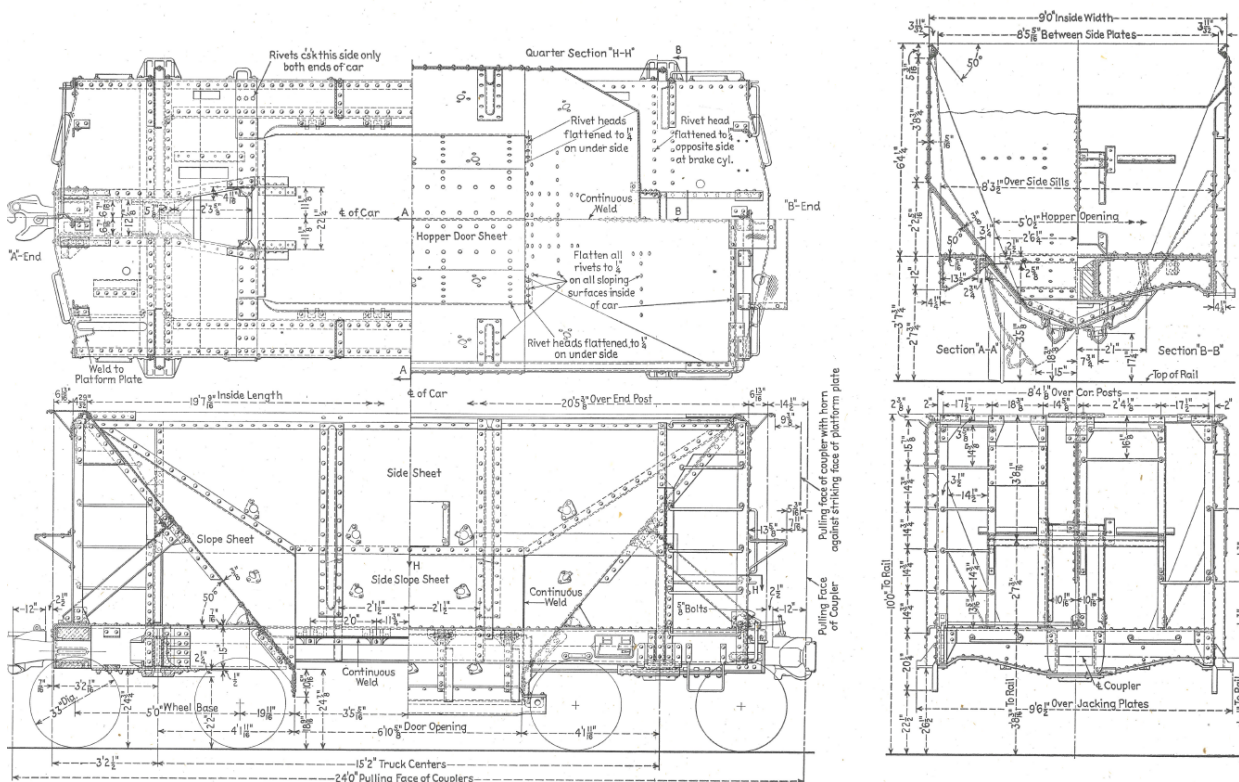


Fig. 2,670—Plan, elevation and sections of Canadian Pacific 50-Ton center discharge ore car.
 Builder, National Steel Car Corporation, Ltd.
 Series 114,100-114,349
 (See also Fig. 2,673)

Figure 2,670 shows “[p]lan, elevation and sections of Canadian Pacific 50-Ton center discharge ore car.” Ex. 1004, 27; Ex. 1054, 27.

2. Overview of Lindström

Lindström discusses “dumping cars and door gears therefor.” Ex. 1005, 1:11–13. An embodiment of such a car appears in Figure 2, which is reproduced below.

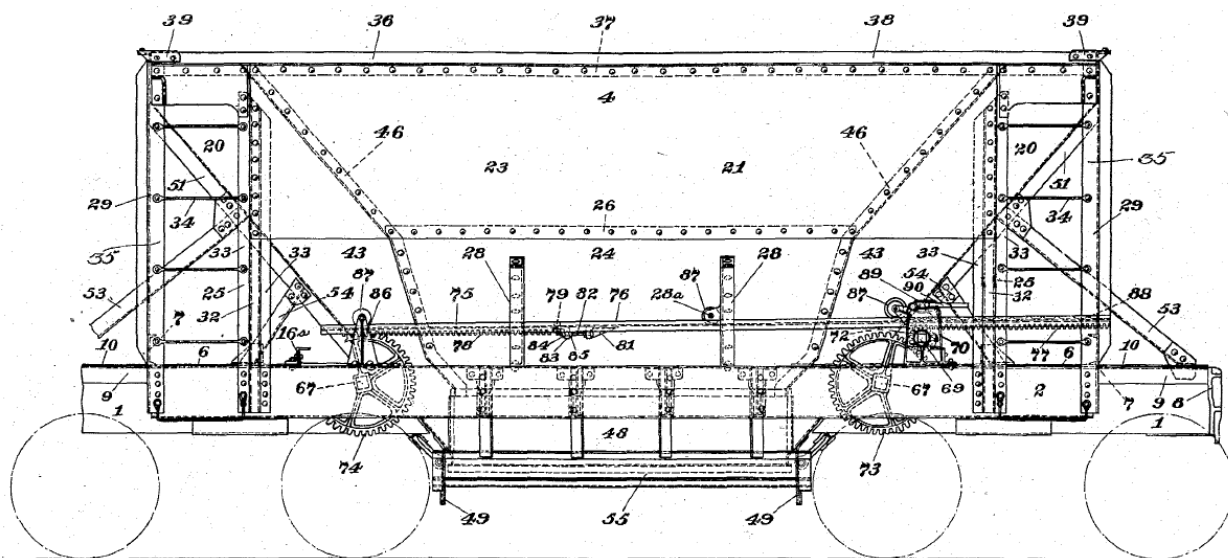


Fig. 2.

Figure 2 “is a side elevational view of the car.” *Id.* at 1:53–54.

The car includes draft sills 1, 1; side sills 2, 2; bolsters 3, 3; and car body 4, 4. Ex. 1005, 1:81–83. “The side sills 2, 2, draft sills 1, 1 and bolster 3, at each end of the car, are connected together by a member 6 which is preferably in the form of a horizontally extending flat plate, thus forming a strong and rigid end framing.” *Id.* at 1:90–95.

Car body 4 includes “sloping end floors 20, 20, and combined side walls and sloping floors 21, 21, some times herein referred to as sloping side floors, which are formed and connected together in such a manner as to permit of the free discharge of the lading the single central unobstructed

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discharge opening.” Ex. 1005 2:50–59. “[D]oors 48, 48 are preferably hinged at the sides of the car.” *Id.* at 3:107–108.

The car also includes a mechanism for operating doors 48. Ex. 1005, 4:43–45. The mechanism includes a beam 55 for each discharge door and operating shaft 69. *Id.* at 4:64–65, 5:36–40. Operating shaft 69 is connected to each beam 55 through pinion 72, shaft 67, and various other components of the mechanism, including clutches, gears, crank arms, and yokes. *Id.* at 4:68–72, 4:80–86, 4:118–121, 5:36–54. For holding shaft 69 stationary, “a toothed member 88 is provided which is mounted on the rack 75 and which may be engaged by a pawl 89 pivotally mounted on the member 70 above the rack 75. This pawl 89 is adapted to be engaged by a cranked portion of a rod 90.” *Id.* at 5:97–104. To open or close doors 48, a user may move rod 90 to disengage pawl member 89 from toothed member 88, followed by using a wrench or crank to operate shaft 69. *Id.* at 5:109–6:5.

3. *Overview of Wong*

Wong discloses a “covered hopper railcar.” Ex. 1006, code [57]. Reproduced below is Figure 4 of Wong.

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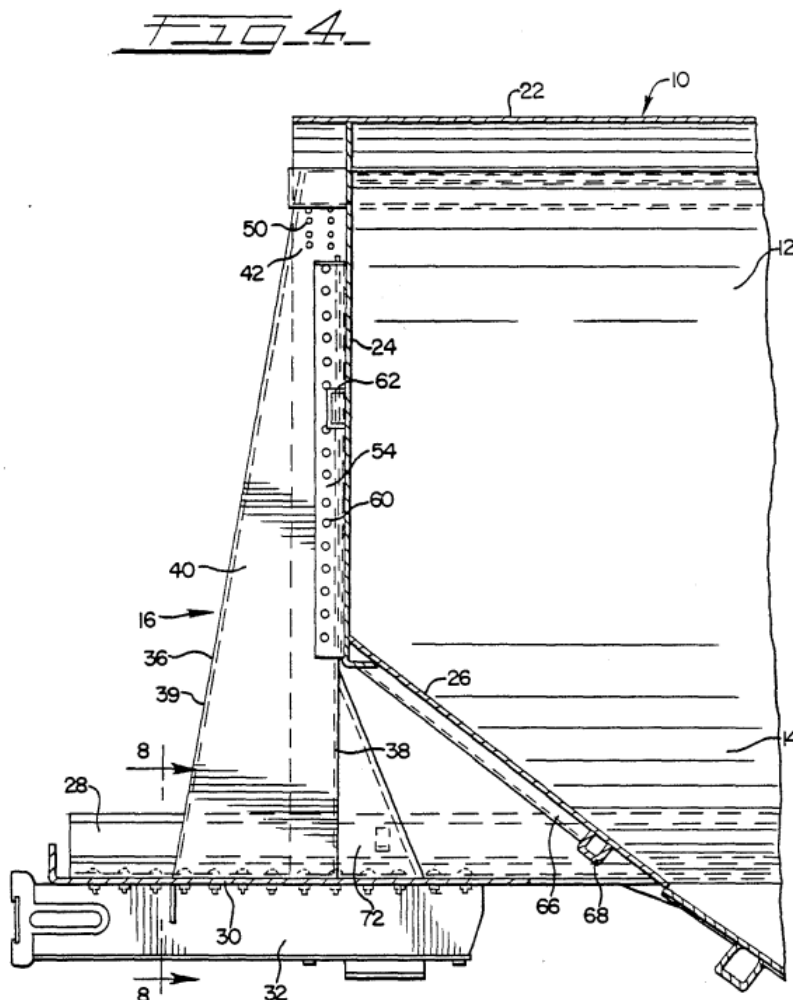


Figure 4 “is a cross-sectional view” of an end of a railcar. *Id.* at 2:47–48. Railcar 10 includes conventional body portion 12 that defines hopper 14. *Id.* at 3:9–10. Railcar 10 also has end structural assembly 16 at either end. *Id.* at 3:10–12.

Body portion 12 includes side sheets 18, 20, top sheet 22, end sheets 24, and end slope sheets 26. Ex. 1006, 3:15–16. Side sheets 18, 20, top sheet 22, and end sheets 24 “are of aluminum construction and are attached to one another in a well-known manner so as to define body portion 12.” *Id.* at 3:16–20.

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4. *Discussion*

In asserting obviousness of claims 2–8 and 10–14 over the 1946 Cyclopedia, Lindström, and optionally Wong, Petitioner cites the 1946 Cyclopedia as allegedly disclosing most limitations of the challenged claims. Pet. 34–75. Petitioner cites Lindström when addressing limitation [2l] and dependent claim 6. *Id.* at 56–59, 68–71. Petitioner cites Wong when addressing limitation [2i]. *Id.* at 50–53. Patent Owner argues that Petitioner has not sufficiently addressed limitations [2i], [2l], [2u], and certain limitations in dependent claims. Prelim. Resp. 26–45. Having reviewed all of the parties’ arguments and evidence, we find Petitioner has shown a reasonable likelihood of prevailing at least on its challenge of independent claim 2 as obvious over the 1946 Cyclopedia, Lindström, and optionally Wong. Pet. 34–64; Prelim. Resp. 26–34. We turn next to detailed discussions of the parties’ disputes regarding limitations [2i], [2l], [2u], followed by other matters.

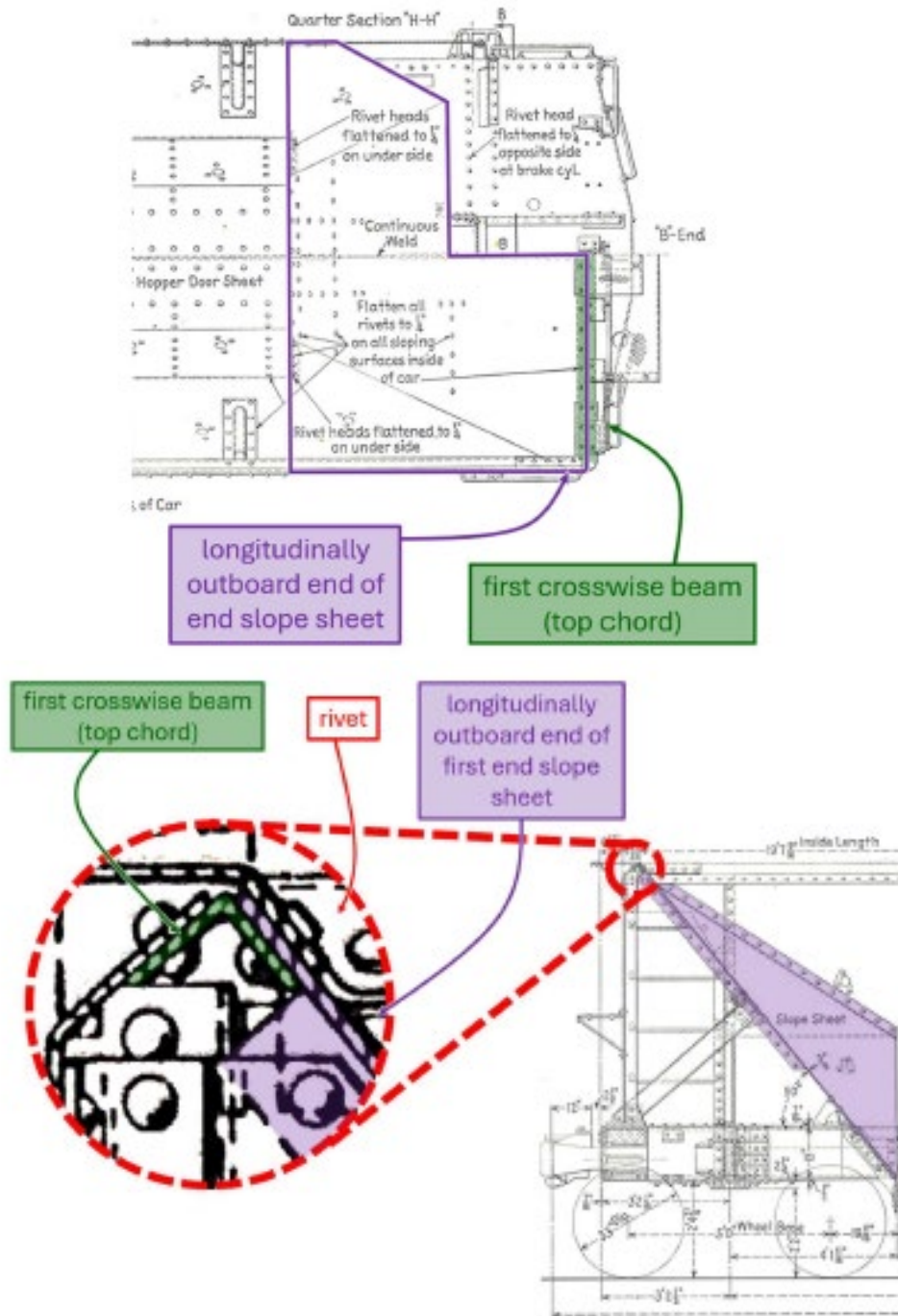
a) *Limitation [2i]*

Limitation [2i] recites “said upper, longitudinally outboard end of said first end slope sheet being reinforced by a first cross-wise extending beam.” Ex. 1001, 24:6–8. Petitioner argues that “[t]he 1946 Cyclopedia’s NSC ore car discloses this limitation.” Pet. 50. Specifically, Petitioner argues that the ore car has its end slope sheet reinforced by an end top chord, which “is a cross-wise beam with a V-shaped cross-section.” *Id.* In support of its position, Petitioner provides the following annotated images of the ore car’s structure.

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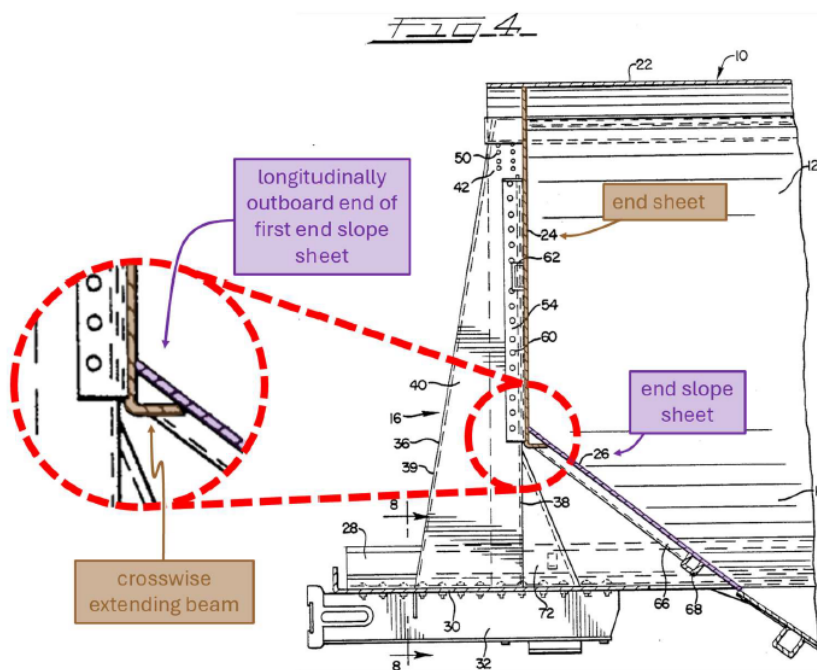
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In these graphics, Petitioner adds a magnified image of part of the ore car structure and labels certain structures as a “slope sheet,” a “first crosswise beam (top chord),” and a “rivet.” *Id.* at 51.

Petitioner further argues, in the alternative, that limitation [2i] would have been obvious over the 1946 Cyclopedia and Wong. Pet. 52–53. Petitioner asserts that the upper end of Wong’s end slope sheet 26 “is reinforced by a cross-wise, L-shaped beam positioned under the slope sheet.” *Id.* at 52. In support of this position, Petitioner provides the following annotated image of Wong’s Figure 4.



In this graphic, Petitioner adds a magnified image of part of the railcar structure and labels certain structures as an “end sheet,” an “end slope sheet,” and a “crosswise extending beam.” *Id.* According to Petitioner, an ordinarily skilled artisan would have been motivated to include such an L-shaped, cross-wise beam to reinforce the NSC ore car’s slope sheet at its upper end where a stress concentration results from connection to another structure. *Id.*

Patent Owner counters that limitation [2i] is neither disclosed by the 1946 Cyclopedia nor obvious over the 1946 Cyclopedia and Wong. Prelim. Resp. 27–30. Patent Owner argues that the 1946 Cyclopedia ore car’s end

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top chord is not the same as the “first cross-wise extending beam” recited in limitation [2i]. *Id.* at 27–28. Addressing Petitioner’s argument that limitation [2i] would have been obvious over the 1946 Cyclopedia and Wong, Patent Owner contends that “the Petition fails to properly consider what Wong teaches.” *Id.* at 28. According to Patent Owner, “[t]he concern in Wong is not with lateral reinforcing beams,” “Wong relates to combining steel and aluminum to get needed strength while avoiding the corrosion issues that arise because steel and aluminum are galvanically coupled and will corrode if in contact with each other.” *Id.* at 29. Asserting that “Wong does not provide reinforcement,” Patent Owner contends that “[t]he Petition fails to articulate a reason why a [person of ordinary skill in the art] would have been motivated to combine the NSC Ore Cars and Wong or that the proposed combination would have been successful.” *Id.*

We first address Petitioner’s assertion that the 1946 Cyclopedia discloses limitation 2[i]. Pet. 50–51. Petitioner provides evidence that the 1946 Cyclopedia discloses an end slope sheet with its upper, longitudinally outboard end riveted to, supported by, and reinforced by an end top chord. *Id.* Petitioner also provides evidence that the 1946 Cyclopedia’s end top chord “is a crosswise beam.” *Id.* This evidence tends to show disclosure of “said upper, longitudinally outboard end of said first end slope sheet being reinforced by a first cross-wise extending beam,” as recited in limitation [2i].

Patent Owner does not persuasively rebut this evidence. Patent Owner’s argument that Petitioner fails to explain “why the alleged ‘first crosswise beam’ it identifies in the NSC Ore Cars, without more, can also be the claimed ‘end top chord’” is not commensurate in scope with claim 2, which does not recite an “end top chord.” *See* Ex. 1001, 23:38–24:60; Prelim. Resp. 27. Moreover, Patent Owner does not provide a persuasive

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reason for its suggestion that an end top chord cannot constitute the “first cross-wise extending beam” recited in claim 2. Prelim. Resp. 27–28. Patent Owner’s observation that the ’892 patent discloses using an “end top chord” and a “first crosswise beam” does not support Patent Owner’s suggestion that the two structures are mutually exclusive. *Id.* Nor does Patent Owner’s vague assertion that “[t]he ‘end top chord’ and the ‘first crosswise beam’ are different structures with different purposes.” *Id.* at 28. Patent Owner does not identify any specific difference in the purposes associated with the two terms. *Id.* Weighing the parties’ arguments and evidence, we find that Petitioner sufficiently shows that the 1946 Cyclopedia discloses limitation [2i]. Pet. 50–51; Prelim. Resp. 27–28.

We turn next to Petitioner’s assertion that limitation [2i] would have been obvious over the 1946 Cyclopedia and Wong. Weighing the parties’ arguments and evidence, we find Petitioner provides sufficient rational underpinning for its assertion that it would have been obvious in view of Wong to implement a cross-wise extending beam to reinforce the 1946 Cyclopedia’s NSC ore car’s end slope sheet. Pet. 52–53; Prelim. Resp. 28–30. In response to Petitioner’s assertion that “[t]he upper, outboard end of [Wong’s slope sheet 26] is reinforced by a cross-wise, L-shaped beam positioned under the slope sheet,” Patent Owner argues that “Wong does not provide reinforcement, but simply shows two sheets being connected for lading containment and load transfer.” Pet. 52; Prelim. Resp. 29. At this stage, we find Petitioner has the better position. Although we agree with Patent Owner that Wong shows two sheets connected to one another, that does not negate Petitioner’s correct observation that Wong shows an upper end of its end slope sheet 26 resting on an L-shaped structure, which apparently would reinforce end slope sheet. Pet. 52; Ex. 1003 ¶ 56.

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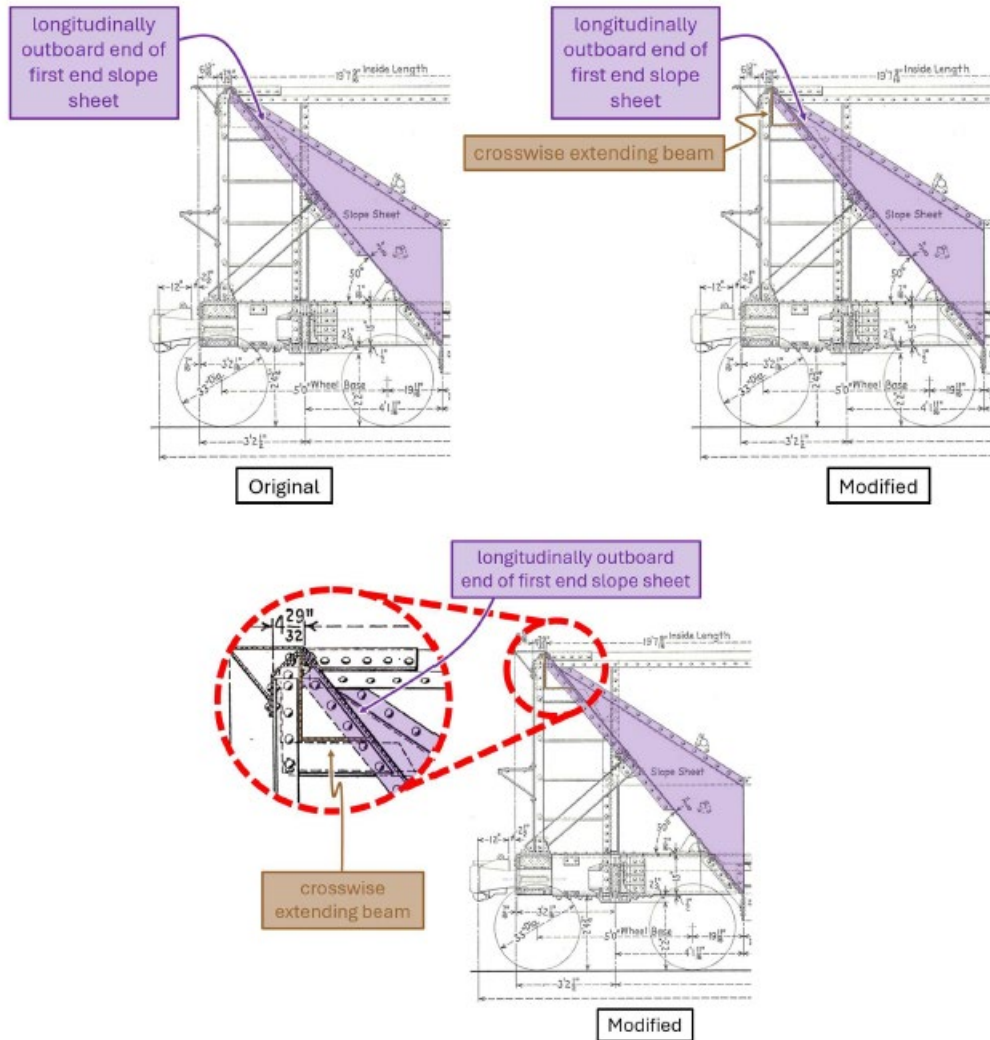
Regarding whether an ordinarily skilled artisan would have had “any reason to look to Wong in the first place,” we again find that Petitioner has the better position at this stage. Prelim. Resp. 29. For example, Wong’s disclosure of “hopper railcar 10” (Ex. 1006, 3:6–9) and the 1946 Cyclopedia’s disclosure of “Freight Cars: Hopper Ore” (Ex. 1004, 27–28; Ex. 1054, 27–28) support Petitioner’s position that “Wong and the 1946 Cyclopedia are in the same field.” Pet. 52; *see also id.* at 76 (“Wong discloses a rail road hopper car (‘hopper railcar’ 10)”), 18–19 (“The ore-car section of the 1946 Cyclopedia—entitled ‘Freight Cars: Hopper Ore’—contains drawings and a photograph of an ore car manufactured by Patent Owner NSC.”); Ex. 1003 ¶ 56 (“Wong and the 1946 Cyclopedia are in the same field of hopper railcars”) (citing Ex. 1004, 27–28; Ex. 1006, code [57]). This position is not persuasively rebutted by Patent Owner’s argument that Wong’s hopper railcar 10 uses aluminum and steel together for certain reasons. Prelim. Resp. 28–29.

Additionally, we disagree with Patent Owner’s argument that the Petition does not address “how the cross-wise beam from Wong would be incorporated into the NSC Ore Cars.” Prelim. Resp. 29 (emphasis omitted). Both the Petition and Dr. Ahmadian show how the cross-wise beam would have been implemented in the following graphics:

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Petitioner's and Dr. Ahmadian's graphics include three images of the end section of the 1946 Cyclopedia's NSC ore car: the original image, a modified image with a cross-wise beam added under the end slope sheet, and another modified image that further includes a magnification of the added cross-wise beam and the upper portion of the end slope sheet. Pet. 53; Ex. 1003 ¶ 56.

We also find unavailing Patent Owner's argument that "the proposed combination is unsatisfactory for its intended purpose," which Patent Owner explains as follows:

It is not clear how the addition of Wong's cross-wise beam in the NSC Ore Cars would transfer load directly down to the

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undercarriage of the car. *Id.* The NSC Ore Cars already have structure for holding up the end slope sheet; and adding a redundant beam would require substantial time investments for the redesign and requisite analyses.

Prelim. Resp. 30. To the extent Patent Owner has identified some tradeoffs associated with the proposed modification, that does not support Patent Owner's contention that the combination would have been viewed as unsatisfactory. *See Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006) (“[A] given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate motivation to combine.”). Nor does it negate Petitioner's evidence that an ordinarily skilled artisan would have recognized benefit in reinforcing the end slope sheet, even if that would not have transferred load directly to the car's undercarriage. Pet. 52–53; Ex. 1003 ¶ 56. Based on all of the record arguments and evidence, we find Petitioner sufficiently shows that limitation [2i] would have been obvious over the 1946 Cyclopedia and Wong. Pet. 50–53; Prelim. Resp. 27–30.

b) Limitation [2l]

Limitation [2l] recites “a door actuator mounted above said sheer plate, said door actuator being at least partially overhung by said first end slope sheet; said door actuator being connected to said door by a mechanical transmission.” Ex. 1001, 24:14–16. Petitioner argues that it would have been obvious in view of the 1946 Cyclopedia and Lindström to configure the 1946 Cyclopedia's ore car with a door actuator above the sheer plate in a position at least partially overhung by the end slope sheet. Pet. 56–59. Petitioner asserts that “Lindström discloses a hopper car with a shear plate comprising plate 6 and an end slope sheet (‘sloping end floor’ 20),” as well as a door actuator “mounted above the shear plate and at least partially

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overhung by the end slope sheet.” *Id.* at 56–57. According to Petitioner, “[i]t would have been obvious to modify the 1946 Cyclopedia’s NSC ore car to add a door-opening mechanism like Lindström’s, including the door actuator.” *Id.* at 58.

Petitioner reasons that an ordinarily skilled artisan would have recognized that the 1946 Cyclopedia’s NSC ore car needs a door opening mechanism to work properly and an ordinarily skilled artisan would have recognized Lindström’s as an obvious solution. Pet. 58–59. Noting that the 1946 Cyclopedia’s does not expressly disclose any particular door opening mechanism in its drawings, Petitioner advances that would have indicated to an ordinarily skilled artisan that “the particular mechanism is not critical and that any suitable mechanism would work.” *Id.* Given these considerations, Petitioner contends that an ordinarily skilled artisan “would have been motivated to make the modification because Lindström and the 1946 Cyclopedia are in the same field, and because the NSC ore car has a configuration similar to that of Lindström’s car.” *Id.* at 58. Petitioner further argues that “[t]hese same considerations would have given a [person of ordinary skill in the art] a reasonable expectation of success in incorporating a door-opening mechanism like Lindström’s in the NSC ore-car design.” *Id.* at 59.

Patent Owner counters that “the Petition fails to meet its burden of showing the combinability of the NSC Ore Cars and Lindström teachings, or any likelihood of success of the proposed combination in an operational rail car.” Prelim. Resp. 33. According to Patent Owner, Petitioner fails to show any motivation to combine the references’ disclosures. *Id.* at 30–31. Patent Owner questions the feasibility of adding Lindström’s door actuator to the 1946 Cyclopedia’s NSC ore car. *Id.* at 31–32. Patent Owner also faults

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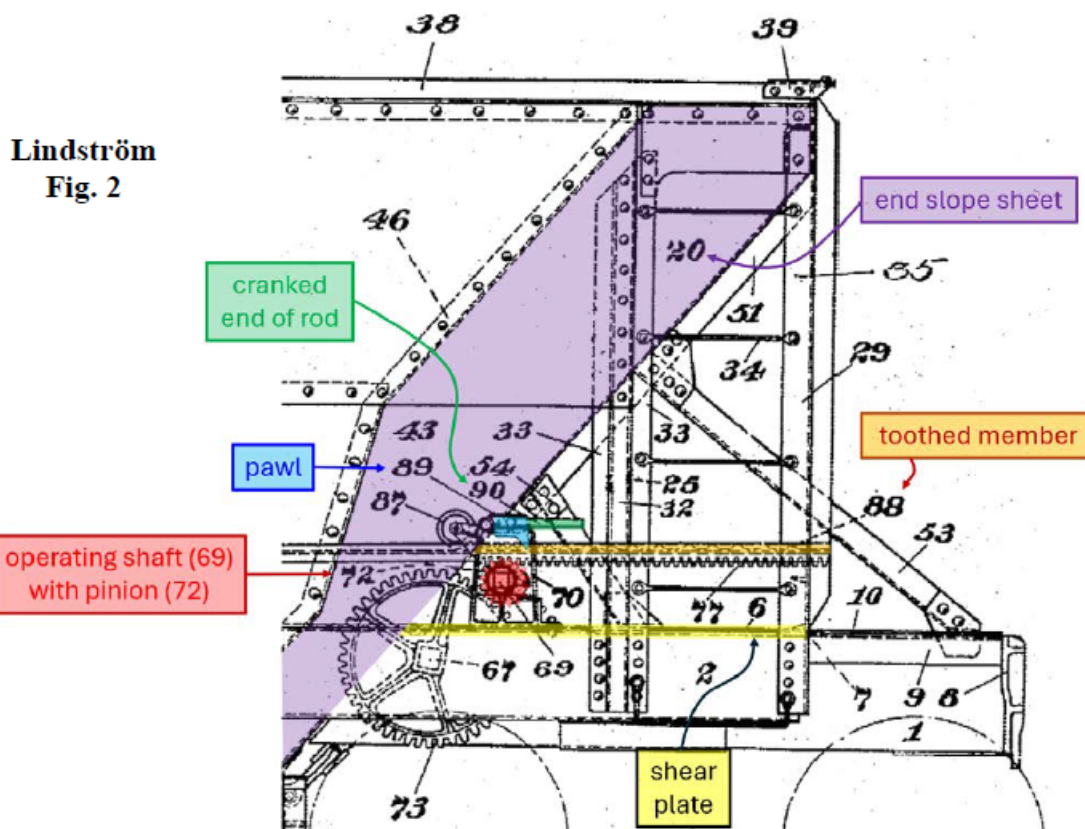
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Petitioner for not discussing “the door opening mechanism shown in [the] photograph” in the 1946 Cyclopedia of the NSC ore car. *Id.* at 32.

Weighing the parties’ arguments and evidence, we find that Petitioner sufficiently provides rational underpinning for its contention that it would have been obvious to use a door actuator like Lindström’s in the 1946 Cyclopedia’s NSC ore car. Pet. 56–59; Prelim. Resp. 30–33. Contrary to Patent Owner’s argument, we find that Petitioner’s evidence tends to show that an ordinarily skilled artisan would have had significant motivating reasons to modify the NSC ore car to include a door actuator like Lindström’s. Pet. 58–59.

In combination with the undisputed recognition that the ore car would have needed a door operating mechanism, Dr. Ahmadian extensively identifies features relevant to implementing a door operating mechanism that are similar in both Lindström’s railcar and the NSC ore car. Ex. 1003 ¶ 60. For example, Dr. Ahmadian notes that the references “are in the same field of hopper railcars” and both disclose railcars with “hoppers, trucks, lower discharge, slope sheets, side sills, top chords, sidewalls, [and] sidewall stiffeners.” *Id.* Patent Owner does not dispute these similarities, but questions whether “door mechanisms are interchangeable” and whether “a [person of ordinary skill in the art] in 2009 would seek to modify a rail car from 1946 to include a door mechanism from 1915.” Prelim. Resp. 32. Given the undisputed similarity of the NSC ore car to Lindström’s railcar, we find Petitioner has shown sufficiently that an ordinarily skilled artisan would have recognized Lindström’s 1915 door actuator as an obvious option to fill the need for a door operating mechanism in the 1946 Cyclopedia’s ore car. Pet. 56–59; Ex. 1003 ¶¶ 59–60.

Petitioner's arguments and evidence also show sufficiently that an ordinarily skilled artisan would have had a reasonable expectation of success. Pet. 56–59; Ex. 1003 ¶¶ 59–60. Patent Owner and Dr. Viz question whether “Lindström's door mechanism would fit into the design of the NSC Ore Cars,” but we find sufficient evidence that the 1946 Cyclopedia's NSC ore car has space similar to Lindström's for a door actuator. Prelim. Resp. 32; Ex. 2035 ¶ 62. Petitioner and Dr. Ahmadian provide evidence of Lindström's door actuator occupying space between a shear plate and an end slope sheet, as shown in an annotated excerpt of Figure 2, reproduced below.



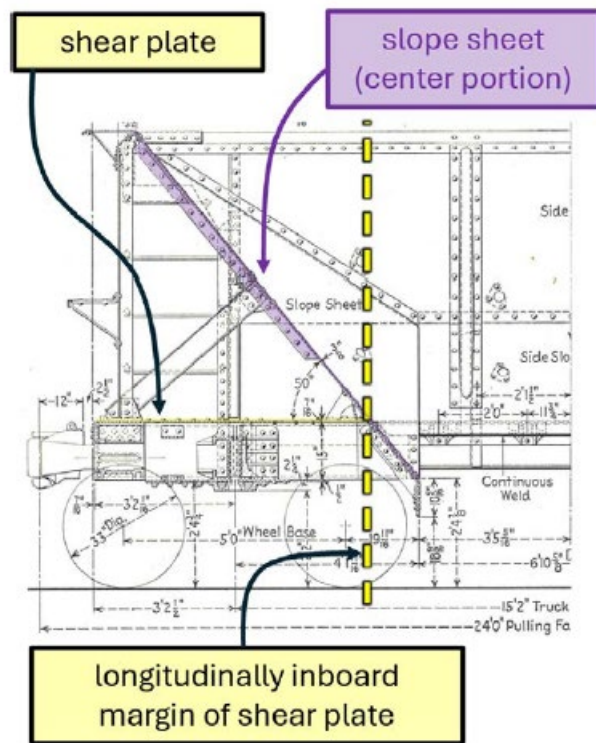
In this annotated excerpt from Lindström's Figure 2, the annotations added by Petitioner and Dr. Ahmadian refer to certain door actuator components occupying a space between a “sheer plate” and an “end slope sheet.”

Pet. 56; Ex. 1003 ¶ 59.

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Petitioner and Dr. Ahmadian also provide evidence that the 1946 Cyclopedia's NSC ore car includes an equivalent space that could be occupied by a door actuator between a sheer plate and an end slope sheet. Pet. 49; Ex. 1003 ¶ 55. Petitioner and Dr. Ahmadian do so, for example, in the annotated excerpt of the 1946 Cyclopedia reproduced below.



In this annotated graphic, Petitioner and Dr. Ahmadian label portions of the NSC ore car as a “sheer plate” and an “end slope sheet,” which bound a space that appears equivalent to the space occupied by Lindström’s door actuator. Pet. 49; Ex. 1003 ¶ 55.

Petitioner’s evidence of a reasonable expectation of success is not persuasively rebutted by Patent Owner’s and Dr. Viz’s conclusory contention that “[a] more detailed engineering study and analysis would need to be performed that would require more quantitative technical information than what these simple renderings in Lindström show.” Prelim. Resp. 32; Ex. 2035. Obviousness does not require absolute predictability of

success. *In re O'Farrell*, 853 F.2d 894, 903–04 (Fed. Cir. 1988). Also, “[a] person of ordinary skill is also a person of ordinary creativity, not an automaton.” *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 421 (2007).

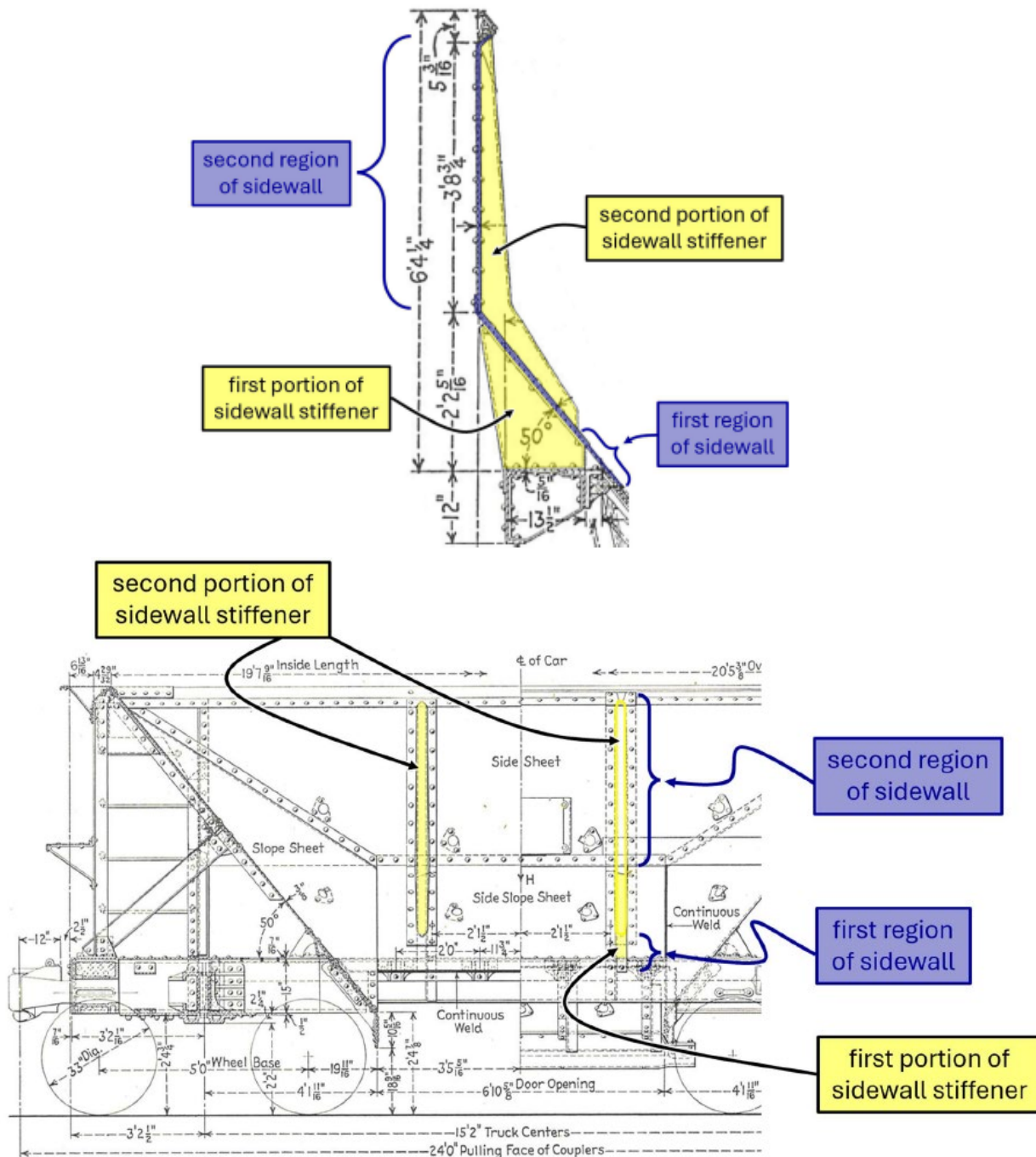
Additionally, we do not find Petitioner’s position persuasively rebutted by Patent Owner’s argument that Petitioner allegedly does not address a door actuator shown in the 1946 Cyclopedia’s photograph of the NSC ore car. Prelim. Resp. 32 (citing Ex. 1004, 28; Ex. 1054, 28). To the extent a door actuator appears in that photograph, Patent Owner does not identify a persuasive reason that would undermine Petitioner’s position. *See id.*

c) Limitation [2u]

Limitation [2u] recites “said sidewall stiffener having web continuity between said first and second portions thereof.” Ex. 1001, 24:59–60. Petitioner argues that “[a]s discussed in connection with limitation [1j], the 1946 Cyclopedia’s NSC ore car discloses this limitation.” Pet. 64. Petitioner explains that the NSC ore car has “two portions of [its] side-wall stiffener positioned on either side of the side wall and arranged in the same vertical plan, as in the ’892 patent.” *Id.* at 32. Petitioner argues that the ’892 patent “refers to . . . alignment in a vertical plane as ‘web continuity.’” *Id.* at 10. In support of its position, Petitioner provides the following annotated images of the ore car’s structures.

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In these images, Petitioner includes annotations identifying first and second sidewall portions, as well as first and second portions of sidewall stiffeners. *Id.* at 32.

Patent Owner counters that “[t]he Petition fails to establish that the claimed ‘sidewall stiffener having web continuity between said first and

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second regions thereof is taught by the NSC Ore Cars.” Prelim. Resp. 23. Patent Owner concedes that the NSC ore cars have sidewall stiffeners, but argues that the stiffeners lack “webs.” *Id.* at 23–24. Patent Owner cites the ’892 patent’s disclosure of a sidewall stiffener configuration in which “the vertical stiffener, 102, acts as the web of a T-section, and the local region of the wall section to which it is joined functions as the flange of that T-section.” Ex. 1001, 15:54–57; Prelim. Resp. 24. Explaining that “[t]he drawings for the NSC Ore Cars appear to have sections that are fastened to the side wall,” Patent Owner contends that “[a person of ordinary skill in the art] would not conclude that what is shown in the drawings relied on by Petition is the same thing as what is claimed in the ’892 Patent.” Prelim. Resp. 24. Patent Owner adds that “the web continuity of the I-beam formation feature of the ’892 Patent differentiates the claims over that asserted art which utilized L-brackets for securing the lower portion of the stiffener to the side wall and includes a single L-bracket on the interior with no discernible sidewall stiffener.” *Id.*

Petitioner shows sufficiently that the 1946 Cyclopedia teaches sidewall stiffeners with “web continuity,” consistent with the ’892 patent’s disclosure. Pet. 9–14, 32–33, 64. Record evidence supports Petitioner’s position that the ’892 patent indicates that alignment of two portions of a sidewall stiffener in a vertical plane constitutes “web continuity.” *Id.* at 10 (citing Ex. 1001, 15:44–46 (“Portions 104 and 106 are co-planar, or substantially co-planar, such that stiffener member 102 has web continuity through member 94.”), 15:64–65). And Patent Owner does not dispute Petitioner’s contention that the NSC ore car’s sidewall stiffeners have two portions vertically aligned with one another, as described in the ’892 patent. Pet. 32; Prelim. Resp. 23–26.

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Patent Owner's arguments are not commensurate in scope with the claim language. Prelim. Resp. 23–26. Intrinsic evidence undermines Patent Owner's suggestion that the claim language “sidewall stiffener having web continuity” requires any particular shape, much less an “I-beam formation feature.” *E.g., id.* at 24. For example, claim 15 depends from claim 2 and requires that “said first and second portions of said sidewall stiffener are made of flat bar . . . positioned in vertical-transverse planes.” Ex. 1001, 26:29–31. This limits claim 15 to a shape other than an “I-beam formation feature.” Under the doctrine of claim differentiation, claim 15 also indicates that claim 2's “sidewall stiffener having web continuity” encompasses shapes other than flat bar. *See SanDisk Corp. v. Kingston Tech. Co.*, 695 F.3d 1348, 1361 (Fed. Cir. 2012). Given this, without claim 2 specifying any shape for the sidewall stiffener, we find unavailing Patent Owner's arguments about the prior art stiffeners lacking an “I-beam” or “T-section” shape. Regarding the '892 patent Specification's discussion of a “T-section” configuration, Patent Owner's arguments and evidence do not provide a persuasive basis for importing this example into claim 2 as a limitation. *See SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004) (“Though understanding the claim language may be aided by the explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim.”).

d) Whether the 1946 Cyclopedia's Figures Show the Same Railcar Configuration

Patent Owner also contends that Petitioner does not support its view that certain images from the 1946 Cyclopedia show the same railcar configuration. Prelim. Resp. 18. Patent Owner argues as follows:

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The first is a schematic drawing of a rail car captioned as being for use by Canadian Pacific, a large rail operator. *See* 1946 Cyclopedia at 27. The second is a picture of a rail car captioned and shown as being used by CN, i.e. Canadian National, a competitor of Canadian Pacific. *See* 1946 Cyclopedia at 28. The Petition and accompanying expert report of Dr. Ahmadian fail to establish that the schematic is the same rail car design as the picture, or vice-versa; or if they are not, that a POSITA would have been motivated to combine these two separate disclosures to arrive at any challenged claim.

Id. (citing Pet. 20–22, 24, 26, 28, 30, 36, 61, 74). According to Patent Owner “[t]his *ipse dixit* conflation of a schematic and picture relating to different NSC Ore Cars, without establishing the identity of those designs, undermines any assertion by Petitioner that there is a reasonable likelihood that any claim is invalid as obvious.” *Id.*

Petitioner counters that a number of aspects of the 1946 Cyclopedia indicate that the schematic and the photograph show the same configuration. Prelim. Reply 3–4. For example, Petitioner notes that the two images cross-reference one another: “Figure 2,670 on page 294 contains the schematics and references the photograph on page 295 with the caption ‘*See also Fig. 2,673.*’ [Ex. 1004,] 27. Figure 2,673 in turn references the schematics of Figure 2,670 with the caption ‘*See also page 294.*’ *Id.* at 28.” *Id.* at 3.

Petitioner also asserts that the railcar numbers in the photographs confirm that Figures 2,670 and 2,673 show the same configuration. Prelim. Reply 4. Noting that “Figure 2,670 indicates that the schematics shown in the figure were used to manufacture ‘Series 114,100-114,349’—250 railcars for Canadian National (CN) with those serial numbers,” Petitioner argues that “[t]he railcar in the photograph in Figure 2,673 is one of those 250

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railcars.” *Id.* Petitioner illustrates this with the following annotated version of Figure 2,673.



Fig. 2.673—Canadian National 50-ton center discharge ore car for use at Steep Rock mining operations. Built by National Steel Car Corporation, Ltd.
Light weight, 40,600 lb.; load limit, 128,400 lb.; capacity, 825 cu. ft.; length inside, 19 ft. 8 in.
* (See also page 294)

In its annotated version of Figure 2,673, Petitioner has encircled the number “114191” on the side of the railcar. *Id.*

Patent Owner responds that “Petitioner’s reliance on ‘*see also*’ notations is insufficient” to show “that the schematic and photograph depicting rail cars for ‘Canadian National’ and ‘Canadian Pacific,’ respectively, represent the same design or embodiment.” Prelim. Sur-reply 3.

Weighing the parties’ arguments and evidence, we find Petitioner’s position more persuasive. Petitioner’s undisputed observations that the figures cross-reference one another and that the railcar number in the photograph is among those listed for the schematic show sufficiently that the two figures show the same configuration, notwithstanding Patent Owner’s observation about references to different Canadian entities.

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e) Whether Petitioner's Declarant Considered the Claimed Invention as a Whole

Patent Owner also contends that Petitioner's declarant did not consider whether the claimed invention as a whole would have been obvious and ignored certain claim limitations. Prelim. Resp. 19–20; Prelim. Sur-reply 4. Patent Owner, thus, argues that his testimony should not be given any weight. Prelim. Resp. 20; Prelim. Sur-reply 4. Petitioner, however, provides citations to his testimony that demonstrate all claim limitations were considered and the claims as a whole were also considered. Prelim. Reply 2–3 (citing Ex. 1003 ¶¶ 17, 24, 49–50, 54–59). The parties may further develop this issue during trial.

E. OTHER GROUNDS

Petitioner's Grounds 1a and 2a challenged only claim 1 of the '892 patent. Accordingly, because Patent Owner statutorily disclaimed claim 1 of the '892 patent, Grounds 1a and 2a are moot, and we do not institute those grounds.

Having found Petitioner shows a reasonable likelihood of prevailing at least on Ground 1b's challenge of independent claim 2, we institute *inter partes* review for Grounds 1b, 1c, 1d, 2b, and 2c on all claims challenged in those grounds. See *SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1354, 1359–60; *PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018); 37 C.F.R. § 42.108(a) (“When instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.”).

III. ORDER

It is:

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ORDERED that *inter partes* review of claims 2–15 of the '892 patent is instituted on all grounds challenging those claims, including Grounds 1b, 1c, 1d, 2b, and 2c; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial; the trial will commence on the entry date of this decision.

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Patent 8,166,892 B2

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EXHIBIT 2

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FREIGHTCAR AMERICA, INC.,
Petitioner,

v.

NATIONAL STEEL CAR LIMITED,
Patent Owner.

IPR2025-01047
Patent 8,132,515 B2

Before HYUN J. JUNG, NEIL T. POWELL, and
RICHARD H. MARSCHALL, *Administrative Patent Judges*.

JUNG, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

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Patent 8,132,515 B2

I. INTRODUCTION

A. *Background and Summary*

FreightCar America, Inc. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting institution of an *inter partes* review of claims 1–44 of U.S. Patent No. 8,132,515 B2 (Ex. 1001, “the ’515 patent”). National Steel Car Limited (“Patent Owner”) filed a Preliminary Response. Paper 12 (“Prelim. Resp.”). With our authorization, Petitioner filed a Reply to Patent Owner’s Preliminary Response (Paper 18), and Patent Owner filed a Preliminary Sur-reply (Paper 22).

Under 35 U.S.C. § 314 (2024), an *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Upon consideration of the Petition and for the reasons explained below, we determine that Petitioner has shown a reasonable likelihood of prevailing with respect to at least one of the challenged claims.

Thus, we institute an *inter partes* review of claims 1–44 of the ’515 patent on all presented challenges. 37 C.F.R. § 42.108(a) (2024) (“When instituting . . . review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.”); *see also SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018).

B. *Real Parties in Interest*

Petitioner identifies FreightCar America, Inc., FreightCar North America, LLC, JAC Operations Inc., and FCA-FASEMEX, LLC as real parties in interest. Pet. 124. Patent Owner identifies itself as a real party in interest. Paper 4, 2.

C. Related Matters

The parties identify *National Steel Car Limited v. FreightCar America, Inc.*, 1:24-cv-00594-JLH (D. Del.) as a related matter. Pet. 124; Paper 4, 2. Patent Owner also identifies IPR2025-01046 and IPR2025-01048. *Id.*

D. The '515 Patent (Ex. 1001)

The '515 patent issued on March 13, 2012 from an application filed on June 16, 2010 that is a division of an application filed on September 14, 2009 and claims priority to a foreign application filed on September 14, 2009. Ex. 1001, codes (22), (30), (45), (62), 1:4–14. Reproduced below is Figure 1 of the '515 patent.

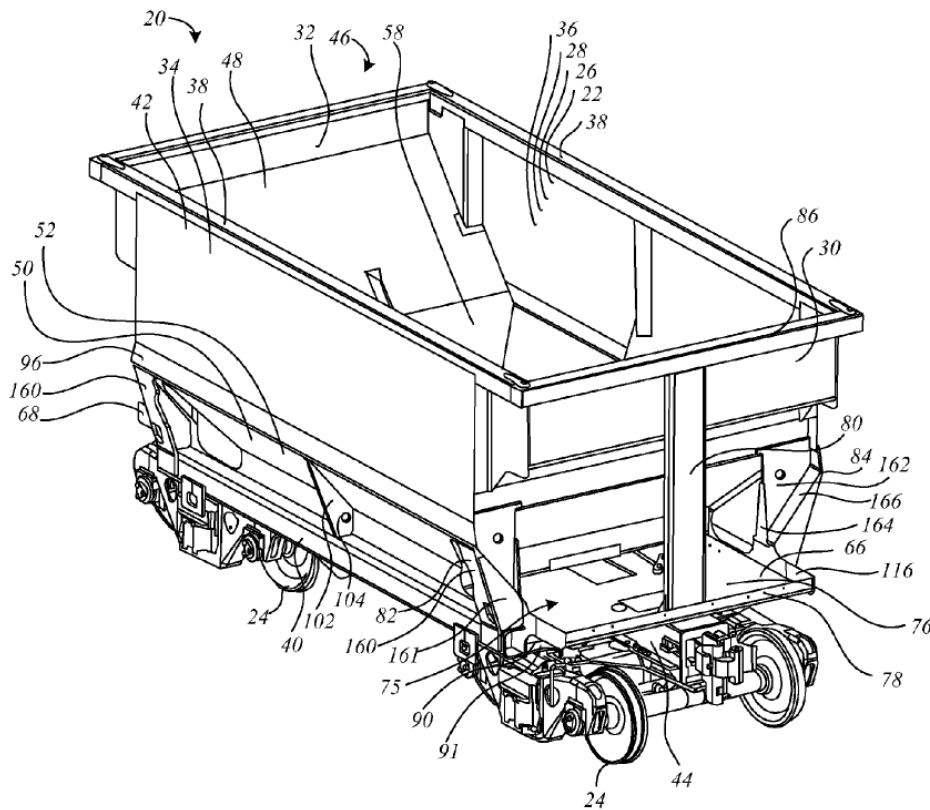


Figure 1

Figure 1 shows an “isometric view of a railroad freight car . . . with all ancillary systems removed to leave only primary structure visible.”

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Ex. 1001, 10:48–51. Railroad freight car 20, as an example, can be “a flow through car, in which lading is introduced by gravity flow from above, and removed by gravity discharge through gated or valved outlets below.” *Id.* at 12:37–42.

Car 20 can have car body 22 and lading containment vessel or shell 26 that includes end walls 30, 32 and side walls 34, 36 to define a generally rectangular wall structure 28. Ex. 1001, 12:55–56, 13:4–10. Lading containment vessel 26 “is in the nature of hopper 52.” *Id.* at 13:55–56. Hopper 52 has “upper portion 58 with substantially vertical wall panels, and a lower stationary portion defined by a set of converging sloped walls,” specifically end sheets 48 and side sheets 50. *Id.* at 13:57–60. Door assembly 56 is “[a]t the lower margin of the sloped walls.” *Id.* at 13:60–61.

Reproduced below is Figure 3a of the ’515 patent.

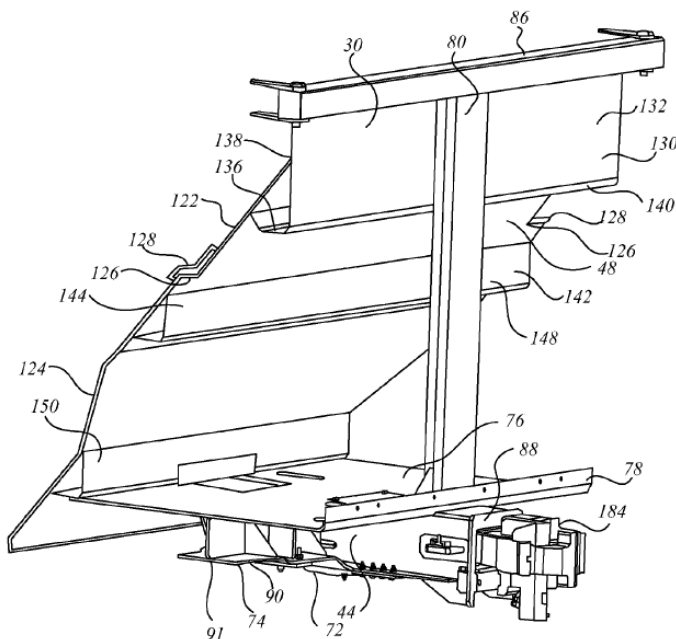


Figure 3a

“Figure 3a shows a perspective view of the end structure of the railroad freight car” shown in Figure 1. Ex. 1001, 10:56–57. Containment

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vessel 26 sits on first and second “[e]nd structures 66, 68 [that] are in turn carried by trucks 24.” *Id.* at 13:63–66. “[T]rucks 24 are most immediately surmounted by center plates 72 of longitudinally extending stub sills 44.” *Id.* at 14:4–6. “Stub sills 44 in turn carry laterally extending main bolster arms 74 of main bolster 90.” *Id.* at 14:6–7. Side sills 40 “tie together, the most laterally outboard extremities of main bolster arms 74.” *Id.* at 14:9–12.

Shear plate 76 is mounted to define a top cover plate of stub sill 44 and extends laterally between side sills 40 and between end slope sheet 48 to end sill 78. Ex. 1001, 14:12–16. Side sills 40 run fore-and-aft along lower portions of side walls 34, 36. *Id.* at 13:12–14. Car 20 can also include end post 80 and a pair of side or corner posts 82, 84. *Id.* at 14:18–20. “End post 80 is rooted in shear plate 76 in line with center sill 44” and “extends fully between shear plate 76 and top chord 86 of end wall 30 or 32.” *Id.* at 14:21–25. Corner posts 82, 84 “are rooted to, and stand upwardly from” where the laterally outboard ends of main bolster arms 74 meet side sills 40 and “extend upwardly from this junction to mate with various elements of the end and side walls.” *Id.* at 14:26–30.

“Car 20 has an end of car machinery space, indicated generally as 75, that is bounded by shear plate 76 on the bottom, the sloped end wall assembly 30 or 32 of the car on the top, main vertical central end post 80, and main side posts 82, 84 at the ends of main bolster 90.” Ex. 1001, 14:43–47, Fig. 3b. Machinery space 75 “is substantially unobstructed by the primary structure of the car.” *Id.* at 14:47–50.

E. Illustrative Claim

The ’515 patent includes 44 claims, all of which Petitioner challenges. Claims 1, 7, 18, 20, 24, and 32 are independent, and reproduced below is claim 1.

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1. A railroad hopper car for carrying particulate material, said hopper car comprising:

a hopper;

first and second end sections for carriage by respective first and second rail road car trucks for rolling motion along railroad tracks in a longitudinal direction;

said hopper being suspended between said first and second end sections, said hopper having a discharge section through which to release lading, and first and second end slope sheets oriented toward said first and second end sections, said end slope sheets being inclined in the longitudinal direction to feed said discharge section;

said first end section including a draft sill extending in the longitudinal direction, a main bolster extending cross-wise to said draft sill, and a shear plate mounted to said draft sill and to said main bolster, said shear plate extending lengthwise along said draft sill and cross-wise from side to side of said hopper car;

said first end slope sheet of said hopper over hanging said shear plate of said first end section; and

said hopper car being free of primary structure directly above said shear plate of said first end section under said overhang of said first end slope sheet of said hopper;

one of:

(a) said first end slope sheet has an upper margin and said hopper car includes an end post extending upwardly from said draft sill to said upper margin of said first end slope sheet; and

(b) said first end slope sheet has an upper margin terminating at an end wall, and said hopper car includes an end post extending upwardly from draft stub sill to said end wall;

said shear plate has a longitudinally outboard margin and said draft sill has a striker located outboard of said longitudinally outboard margin of said shear plate, and said end post is one of:

(a) rooted to said draft sill adjacent to said striker;

(b) rooted to said shear plate adjacent to said longitudinally outboard margin of said shear plate;

said bolster has first and second laterally outboard distal ends, and said hopper car has corner posts extending upwardly from said distal ends of said bolster to said first end slope sheet; and

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said hopper car has a machinery space bounded by (a) said first end slope sheet; (b) said shear plate of said first end section; (c) said end post; and (d) said corner posts, and said machinery space is free of any other primary structure.

Ex. 1001, 23:8–56.

F. Asserted Prior Art and Proffered Testimonial Evidence

Petitioner identifies the following references as prior art in the asserted grounds of unpatentability:

Name	Reference	Exhibit
Hart	US 992,192, issued May 16, 1911	1008
Lindström	US 1,321,928, issued Nov. 18, 1919	1005
Campbell '051	US 1,537,051, issued May 5, 1925	1012
Campbell '652	US 1,999,652, issued Apr. 30, 1935	1013
Schuller	US 3,710,729, issued Jan. 16, 1973	1014
Wong	US 4,941,411, issued July 17, 1990	1006
1906 Cyclopedia	Rodney Hitt, The Car Builders' Dictionary, (The Railroad Gazette ed., 5th ed., 1906)	1009
1946 Cyclopedia	1946 Car Builders' Cyclopedia, (Roy V. Wright ed., 17th ed., 1946)	1004
Ratcliffe 1	David Ratcliffe, Modern Private Owner Wagons on British Rail (1989)	1017
Karig	Martin Robert Karig III, Coal Cars: The First Three Hundred Years (2007)	1016

Petitioner contends that the above-listed references qualify as prior art under at least § 102(b).¹ Pet. 30–31 (citing Ex. 1022). Petitioner also relies on a Declaration of Dr. Mehdi Ahmadian. Pet. 29; Ex. 1003. Patent Owner provides a Declaration of Mark J. Viz, Ph.D., P.E. (Ex. 2035).

¹ The relevant sections of the Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284 (Sept. 16, 2011), took effect on March 16, 2013. Because the '515 patent claims priority to an application filed before that date, our citations to 35 U.S.C. §§ 102 and 103 in this Decision are to their pre-AIA versions. *See also* Pet. 21 (assuming for the Petition that September 11, 2009 is the priority date).

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G. Asserted Grounds

Petitioner asserts that claims 1–44 are unpatentable on the following grounds:

Claims Challenged	35 U.S.C. §	References/Basis
1, 2	103(a)	Hart, 1906 Cyclopedia
3	103(a)	Hart, 1906 Cyclopedia, Schuller
4	103(a)	Hart, 1906 Cyclopedia, Schuller, Karig
5, 6	103(a)	Hart, 1906 Cyclopedia, Campbell '652
7–16, 20, 23, 24–28, 30, 31	103(a)	Hart, 1906 Cyclopedia, Wong
17–19	103(a)	Hart, 1906 Cyclopedia, Wong, Campbell '051
21, 22, 29	103(a)	Hart, 1906 Cyclopedia, Wong, Schuller
32–34	103(a)	Lindström, Wong, Ratcliffe 1, Hart
35–44	103(a)	Lindström, Wong, Ratcliffe 1, Hart, 1946 Cyclopedia

Pet. 19.

II. ANALYSIS

A. Legal Standards

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent [claim] it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016). This burden of persuasion never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). The Board may authorize an *inter partes* review if we determine that the information presented in the Petition shows that there is a reasonable likelihood that Petitioner will prevail with respect to at least one of the claims challenged in the petition. 35 U.S.C. § 314(a).

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Petitioner contends that the challenged claims of the '515 patent are unpatentable under § 103. Pet. 19, 30. A claim is unpatentable under § 103 if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 17–18 (1966). When evaluating a combination of teachings, we must also “determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

B. Level of Ordinary Skill in the Art

Petitioner contends that a person of ordinary skill in the art “would have had at least a bachelor’s degree in a discipline related to mechanical engineering, physics, structural design, or an equivalent discipline, and at least two years of experience designing or analyzing rail cars or similar vehicles.” Pet. 29 (citing Ex. 1003 ¶¶ 42–46).

Patent Owner responds that Petitioner’s proposed level of ordinary skill in the art is incorrect, “because a person having only designed ‘similar vehicles’ to rail cars would not necessarily be applicable to the art of the '515 Patent.” Prelim. Resp. 9 (citing Ex. 2035 ¶¶ 33–40). According to Patent Owner, a person of ordinary skill in the art “would have at least a bachelor’s degree in a discipline related to mechanical engineering, physics,

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structural design, or an equivalent discipline, and at least two years of experience designing or analyzing rail cars.” *Id.* (citing Ex. 2035 ¶ 35).

The parties agree that one of ordinary skill in the art “would have had at least a bachelor’s degree in a discipline related to mechanical engineering, physics, structural design, or an equivalent discipline, and at least two years of experience designing or analyzing rail cars.” Pet. 29; Prelim. Resp. 9. Patent Owner, however, disagrees that the experience should include designing or analyzing “similar vehicles.” Prelim. Resp. 9.

At this stage, for the reasons below, limiting the ordinary skill in the art to “at least two years of experience designing or analyzing rail cars” does not affect our analysis of the parties’ dispute or our determination that there is a reasonable likelihood that Petitioner would prevail with respect to at least one of the challenged claims. Thus, based on the preliminary record, we adopt Petitioner’s proposed level of ordinary skill to determine whether review should be instituted.

Patent Owner also argues that Petitioner’s declarant does not have “actual industry experience with railcar structures” and, thus, “makes the wrong conclusions and conflates various concepts that a [person of ordinary skill in the art] with practical industry experience and knowledge of rail cars would not.” Prelim. Resp. 9–10 (citing Ex. 2035 ¶ 35). For the reasons discussed below, in our preliminary analysis, we give credit to the cited testimony of Petitioner’s declarant, because it finds support in the relied-upon portions of the record.

C. Claim Construction

In an *inter partes* review, the claims are construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b),

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including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.

37 C.F.R. § 42.100(b); *see Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc).

Petitioner proposes no interpretation for any claim term and contends that “[m]ost claim terms are conventional names for standard rail-car features.” Pet. 29. Petitioner also argues that “[t]he challenged claims are unpatentable under any reasonable construction.” *Id.*

Patent Owner responds that, for its Preliminary Response, no construction is required to deny institution. Prelim. Resp. 11. Patent Owner contends ordinary and customary meaning in view of the Specification and prosecution history is sufficient. *Id.*

At this stage, we do not need to construe expressly any term to determine whether to institute review. *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms that . . . are in controversy, and only to the extent necessary to resolve the controversy.’”) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

Patent Owner also responds that Petitioner “does not advance any claim constructions” but “takes numerous stances on claim construction and what claim terms should mean, sometimes leading to inconsistent positions.” Prelim. Resp. 10 (citing Pet. 29). Patent Owner argues that Petitioner fails to justify such claim constructions and, thus, fails to show with particularity that the asserted grounds meet the challenged claims. *Id.* at 10–11.

According to Patent Owner, the Petition should be denied, because it fails to

comply with 35 U.S.C. § 322(a)(3) and 37 C.F.R. § 42.204(b)(3)-(4). *Id.* at 11.

In its challenges, Petitioner expressly argues with citations to the '515 patent that its Specification provides a definition or that the claims encompass, at least, the one embodiment described by the '515 patent. *See, e.g.*, Pet. 34 (“The '515 patent expressly defines ‘draft sill.’”), 37 (“Because limitation [1e] should be interpreted to cover the only embodiment in the '515 patent, the reinforcement beams shown in Fig. 3a do not constitute “primary structure” prohibited by limitation [1e].”), 49–50 (“If claim 1 is construed to cover the preferred embodiment, as it should be, then a machinery space is free of primary structure even if primary structure at the perimeter of the machinery space extends a *de minimis* amount into that space.”). Based on the record at this preliminary stage, Petitioner sufficiently explains why terms have defined meanings or why the claims encompass the one described embodiment.

Thus, we do not agree with Patent Owner that Petitioner fails to justify its claim construction positions or that the Petition should be denied under 35 U.S.C. § 322(a)(3) and 37 C.F.R. § 42.204(b)(3)–(4). Prelim. Resp. 10, 11.

D. Asserted Obviousness of Independent Claim 24

1. Hart (Ex. 1008)

Hart “relates to dump cars,” particularly those known as Hart convertible cars, “in which provision is made for the efficient and rapid unloading of the car.” Ex. 1008, 1:9–14. Reproduced below is Figure 1 of Hart.

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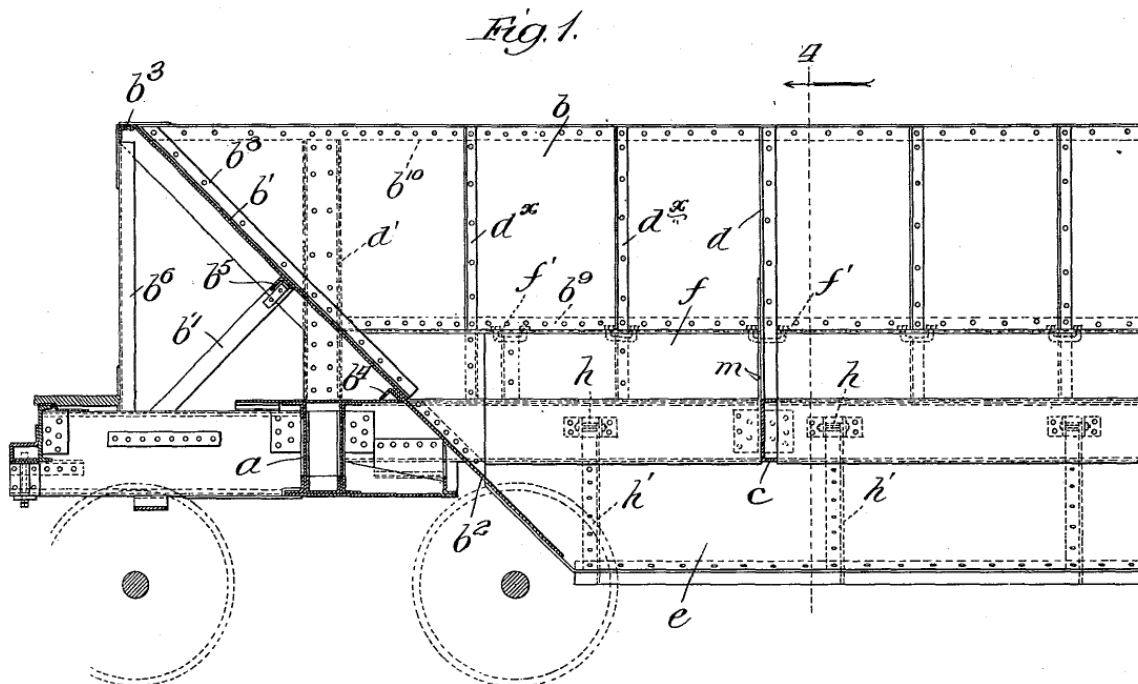


Figure 1 shows “a longitudinal elevation, partly in section,” of Hart’s car. Ex. 1008, 1:17–19. The car has an underframe comprising bolsters *a* and intermediate cross members *c*, both of which are connected to longitudinal sills *c*². *Id.* at 1:29–34. “Suitably secured to the bolsters at each side of the car are posts or stakes *d*” that “extend[] downwardly below the level of the transverse members” and “are suitable connected to the transverse members of the underframe.” *Id.* at 1:34–35, 1:45–50, Fig. 4. Secured to the posts are plate girder sides *b* with lower longitudinal member *b*⁹ and upper member *b*¹⁰. *Id.* at 1:37–40.

“[U]pper member *b*¹⁰ of the plate girder side extends beyond the end of the supporting post *d*’ and has connected to its outer end a support *b*⁶.” Ex. 1008, 1:92–95. “[S]upport *b*⁶ [is] in turn connected to a short side sill *b*²⁰ extending from the bolster toward the end of the car, and the end sill *c*³ is in turn connected to the short side sills.” *Id.* at 1:95–99. “Suitable draft beams *c*⁴ are connected to the end sill and to the bolster.” *Id.* at 1:101–103.

According to Hart, “*b*’ represents the inclined ends of the car.”
Ex. 1008, 2:46–47. The “ends of the car [are] suitably supported by upper and lower transverse brace members *b*³ and *b*⁴, respectively, the upper brace member being supported from the sides of the car and suitably braced by an upright *b*⁶.” *Id.* at 2:48–53. “The lower portion of the end of the car is secured to a transverse member *b*⁴, which also serves to support the upper portion of the end of the hopper.” *Id.* at 2:53–57. “Transverse braces *b*⁵ and inclined brace *b*⁷ serve to further strengthen the ends of the car.” *Id.* at 2:57–59.

2. *The 1906 Cyclopedia (Ex. 1009)*

The 1906 Cyclopedia is “an illustrated vocabulary of terms which designate American railroad cars their parts attachments and details of construction with definitions and illustrations of typical British practice in car construction.” Ex. 1009, 2. Reproduced below is Figure 53 of the 1906 Cyclopedia.

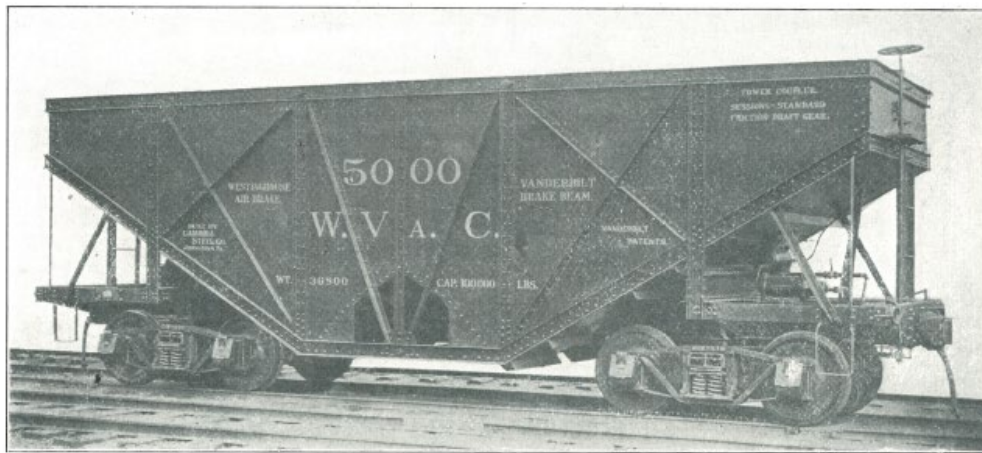


Fig. 53. Hopper Car, Structural Steel, Vanderbilt Patent. Capacity, 100,000 lbs. Weight, 36,800 lbs. Cambria Steel Co., Builders.
(Drawings of this car are shown in Figs. 417-420.)

Figure 53 shows a “Hopper Car, Structural Steel, Vanderbilt Patent.”
Ex. 1009, 4.

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3. Wong (*Ex. 1006*)

Wong specifically relates “to an all-steel end structure for a railcar having an aluminum body portion.” *Ex. 1006*, 1:6–8. Reproduced below is Figure 4 of Wong.

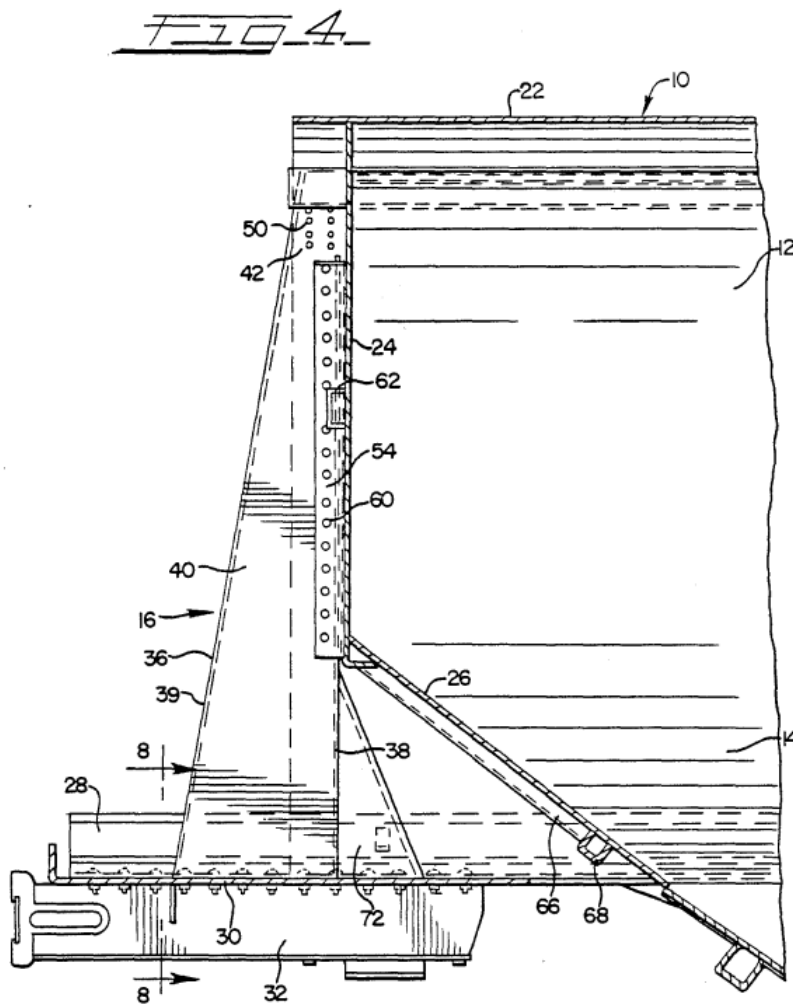


Figure 4 “is a cross-sectional view” of an end of a railcar. *Ex. 1006*, 2:47–48. Railcar 10 includes conventional body portion 12 that defines hopper 14. *Id.* at 3:9–10. Railcar 10 also has end structural assembly 16 at either end. *Id.* at 3:10–12.

Body portion 12 includes side sheets 18, 20, top sheet 22, end sheets 24, and end slope sheets 26. *Ex. 1006*, 3:15–16. Side sheets 18, 20, top sheet 22, and end sheets 24 “are of aluminum construction and are attached

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to one another in a well-known manner so as to define body portion 12.” *Id.* at 3:16–20.

4. *Independent Claim 24*

Petitioner argues with citations to the record that its proposed combination of Hart, the 1906 Cyclopedia, and Wong would have rendered obvious independent claim 24. Pet. 76–78. Patent Owner disputes that Petitioner has shown that the proposed combination would have rendered obvious certain limitations of claim 24. Prelim. Resp. 49–50.

Based on our review of Petitioner’s arguments and evidence, we determine that Petitioner shows that its proposed combination of Hart, the 1906 Cyclopedia, and Wong teaches or suggests the limitations of claim 24 and that one of ordinary skill in the art would have combined those references in the manner asserted with a reasonable expectation of success. We specifically address below the limitations disputed at this stage.

- a) *“there being a first end wall extending between said first and second side walls; said first end slope sheet having an uppermost margin, said uppermost margin meeting said first end wall at a first junction; said hopper car having a first beam extending cross-wise between said first and second side walls at said first junction of said uppermost margin of said first end slope sheet and said first end wall, said first beam being a beam of hollow section; said first end wall has an upper portion and a lower portion; said upper portion of said first end wall extends upwardly of said first junction of said uppermost margin of said first end slope sheet and said first end wall; said lower portion of said end wall extends downwardly of said first junction of said uppermost margin of said first end slope sheet and said first end wall; and said lower portion of said first end wall forms part of said first beam”*

For the limitations quoted above, Petitioner refers to its arguments for similar limitations recited by claim 7. Pet. 77; *see also id.* at 12 (labeling the

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limitations “24f”). For claim 7, Petitioner refers to its arguments for claim 1 that “it would have been obvious to modify Hart to add an end wall supported by an end post extending from the draft sill” in view of the 1906 Cyclopedia. *Id.* at 62; *see also id.* at 5 (labeling the limitations “7h”).

In particular, for the “end wall” of claim 1, Petitioner argues that the 1906 Cyclopedia discloses a “first end slope sheet [that] has an upper margin terminating at an end wall.” Pet. 41–42 (citing Ex. 1001, Fig. 1; Ex. 1009, 13, Fig. 53); *see also id.* at 2 (labeling the limitations “1f”). Petitioner also argues that Hart would have been modified “to add an end wall supported by an end post” “(i) by leaving the end slope sheets in place and increasing the overall height of the hopper; or (ii) by reducing the inclination of the slope sheets so that their outboard ends terminate at a lower height (i.e., lower along the end wall).” *Id.* at 42 (citing Ex. 1003 ¶ 77).

Petitioner further argues that the modification would have been made because “doing so increases the hopper’s volume without increasing the rail car’s length or width (or even its height, if the end wall is added by lowering the slope sheets)” and “by 2009, end walls were common and well-known optional features of hopper cars.” Pet. 42–43 (citing Ex. 1003 ¶¶ 78, 79). Petitioner provides examples of such end walls. *Id.* at 43–45 (citing Ex. 1003 ¶ 79; Ex. 1009, Figs. 50, 52, 53, 54, 55, 56).

In Petitioner’s view, “incorporating an end wall and post (as in the Cambria Steel car) in Hart’s design would have been obvious.” Pet. 45 (citing Ex. 1003 ¶ 80). Petitioner argues that it would have been “one of a finite number of well-understood options for the end of a hopper car, *i.e.*, (i) incorporating an end wall or (ii) extending the slope sheet to the top cord,” and a “routine design choice” that would have been “governed by balancing well-understood considerations, *e.g.*, maintaining the desired

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maximum exterior dimensions of the railcar, maximizing the capacity of the hopper, supporting the loads carried by the slope sheet and hopper doors, and maximizing the car's efficiency in discharging its intended lading." *Id.* (citing Ex. 1003 ¶ 80).

For the limitations quoted above, Petitioner additionally argues that "Wong discloses an end wall and a hollow section beam defined by the lower portion of the end wall and the slope sheet." Pet. 62 (citing Ex. 1006, Fig. 4). Reproduced below is Figure 4 of Wong annotated by Petitioner.

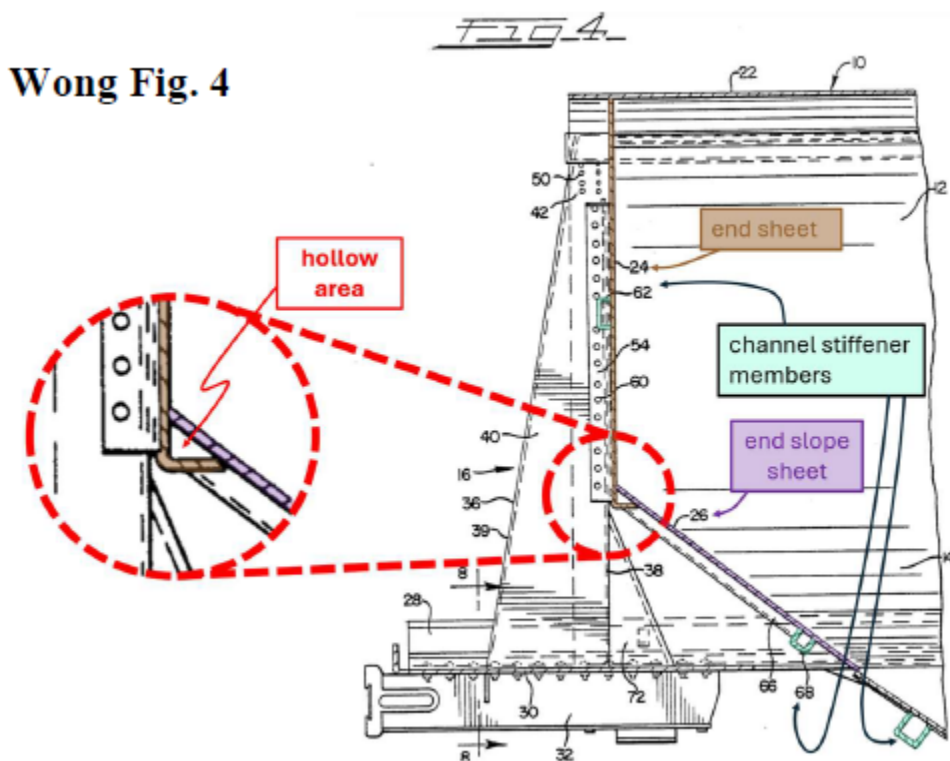


Figure 4 of Wong shows "a cross-sectional view" of an end of a railcar with Petitioner's labels for "end sheet," "channel stiffener members," and "end slope sheet." Pet. 62; Ex. 1006, 2:47–48. Petitioner also adds an enlarged view of where the "end sheet" meets the "end slope sheet" and adds a label for a "hollow area." Pet. 62.

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According to Petitioner, “[i]t would have been obvious to modify Hart to further support the upper, outboard end of the slope sheet with a crosswise, L-shaped beam as in Wong,” and one of ordinary skill in the art would have been motivated to do so, because of “the benefits of reinforcing the slope sheet at its upper end, where its connection with another structure creates a stress concentration.” Pet. 63 (citing Ex. 1003 ¶ 108). Petitioner points to Hart’s transverse beam b^3 and argues that it suggests using a transverse beam like Wong if Hart is modified so that upper beam b^3 no longer supports the slope sheet. *Id.* (citing Ex. 1008, Fig. 1). Petitioner also argues that the references are in the same field and that there would have been a reasonable expectation of success. *Id.* at 63–64 (citing Ex. 1003 ¶ 108; Ex. 1008, Fig. 1).

Based on the preliminary record, Petitioner shows that its proposed combination of Hart, the 1906 Cyclopedia, and Wong teaches or suggests the above-quoted limitations of claim 24 and that one of ordinary skill in the art would have combined those references in the manner asserted with a reasonable expectation of success.

Patent Owner responds by referring to its previous arguments. Prelim. Resp. 49 (citing Pet. 77; Ex. 2035 ¶ 145). For the “end wall” of claim 1, Patent Owner responds that “the ‘end post’ on the Cambria Steel car terminates at the end wall, not to and including the end wall shown in the ‘515 Patent” and so Hart would not have been combined with the 1906 Cyclopedia, as proposed by Petitioner. *Id.* at 22 (citing Pet. 41–45; Ex. 1003 ¶¶ 76–81; Ex. 2035 ¶¶ 69, 70). Patent Owner also argues that the overall height of Hart would not have been increased, because rail cars are based on standard sizes and specifically designed. *Id.* at 22–23 (citing Ex. 2035 ¶ 71). Patent Owner further argues that lowering the slope sheet would change load

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distribution and necessitate other changes. *Id.* at 23 (citing Pet. 42; Ex. 1003 ¶ 77; Ex. 2035 ¶ 72).

Patent Owner, thus, argues that the proposed combination would not have been one of a finite number of alternatives or routine design choice and is, instead, based on impermissible hindsight, as shown by the different relied-upon rail car designs. Prelim. Resp. 24 (citing Pet. 45; Ex. 2035 ¶ 76). Patent Owner contends that Petitioner provides no meaningful description of how the ordinarily skilled artisan “would start in view of one rail car and end up in view of others” and fails to show a reasonable likelihood that the limitation is taught or rendered obvious. *Id.* at 24–25 (citing Pet. 43–45; Ex. 1003 ¶ 79; Ex. 2035 ¶¶ 69–77).

Petitioner, however, shows that the claimed “end wall” was known in the art. Pet. 41–42, 43–45; Ex. 1003 ¶ 79; Ex. 1009, Figs. 50, 52, 53, 54, 55, 56. Petitioner also provides a reason that such a known end wall would have been added to Hart. Pet. 42–43; Ex. 1003 ¶¶ 78, 79.

Even if we agreed with Patent Owner’s contentions, Petitioner’s asserted reason of increasing the hopper’s volume, at this stage, sufficiently shows an end wall would have been added to Hart. Pet. 42–43; Ex. 1003 ¶¶ 78, 79. Patent Owner does not address directly that asserted reason. *See* Prelim. Resp. 22–25, 49. The record, at this stage, indicates that, despite the disadvantages identified by Patent Owner, end walls were used in the art and, thus, adding end walls was within the ordinary skill in the art. Ex. 1003 ¶ 79; Ex. 1009, Figs. 50, 52, 53, 54, 55, 56.

For claim 7, Patent Owner responds that Wong teaches how to combine steel and aluminum structures to avoid corrosion and is less concerned about lateral reinforcing beams. Prelim. Resp. 39–40 (citing Pet. 62–64; Ex. 1006, Figs. 3, 4; Ex. 2035 ¶¶ 110, 111). Patent Owner also

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argues that Wong’s L-bracket “is not similar to the claimed ‘first crosswise beam’ because it is the joint where the slope sheet is connected to the end vertical sheet” and does not provide reinforcement like the claimed “first crosswise beam” does to the slope sheet. *Id.* at 40 (citing Ex. 2035 ¶ 111). Patent Owner further argues that one of ordinary skill in the art would not have looked to Wong to improve Hart. *Id.* (citing Ex. 2035 ¶ 111).

Patent Owner additionally argues that the proposed combination is unsatisfactory for either rail car’s intended purpose, because Hart already has a structure to support the alleged end slope sheet and a redundant beam would have required redesign and analyses. Prelim. Resp. 40–41 (citing Pet. 63; Ex. 1003 ¶ 108; Ex. 2035 ¶¶ 113, 114). Patent Owner, thus, argues that Petitioner fails to show a reasonable likelihood of prevailing. *Id.* at 41 (citing Ex. 2035 ¶¶ 110–114).

Patent Owner’s arguments regarding the beam providing reinforcement is not commensurate with the scope of the above-quoted limitation. Prelim. Resp. 40. The limitation does not require the “first beam” to provide reinforcement. Ex. 1001, 28:21–35. Also, based on the preliminary record, the L-bracket identified by Petitioner in Wong would be within the scope of the above-quoted limitation. Further, at this stage, Petitioner sufficiently shows that Wong and Hart are in the same field and, thus, one of ordinary skill in the art would have looked to Wong. Pet. 63–64; Ex. 1003 ¶ 108. Additionally, Petitioner’s reason for reinforcing specifically where the asserted end wall meets the asserted end slope sheet finds support in the record at this stage, in particular its declarant’s testimony and an asserted suggestion in Hart itself. Pet. 63; Ex. 1003 ¶ 108; Ex. 1008, Fig. 1. Patent Owner has not yet addressed Petitioner’s supporting evidence. *See* Prelim. Resp. 39–41.

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- b) “said lower portion of said first end wall has a margin, and said margin is bent to mate with said first end slope sheet as a second junction distant from the first junction, said lower portion of said first end wall and said uppermost margin of said first end slope sheet co-operating to define said first beam”

For the limitations quoted above, Petitioner refers to the same arguments for claim 7 summarized above. Pet. 78; *see also id.* at 12 (labeling the limitations “24i”). Patent Owner also refers to its previous responsive arguments. Prelim. Resp. 50 (citing Pet. 78; Ex. 2035 ¶ 146).

For the reasons discussed above, Petitioner sufficiently shows at this stage that its proposed combination teaches or suggests the above-quoted limitations.

5. *Petitioner Shows a Reasonable Likelihood of Prevailing*

Based on the present record, Petitioner sufficiently shows that its proposed combination of Hart, the 1906 Cyclopedia, and Wong teaches, suggests, or would have been understood to disclose the limitations of independent claim 24 and that one of ordinary skill in the art would have combined these references in the manner asserted with a reasonable expectation of success.

Petitioner, thus, shows a reasonable likelihood of prevailing in its challenge to claim 24 as unpatentable over Hart, the 1906 Cyclopedia, and Wong. We, therefore, institute review on all challenged claims on all grounds set forth in the Petition. 37 C.F.R. § 42.108(a); *see also SAS*, 138 S. Ct. at 1354.

E. Remaining Challenges

Petitioner argues with citations to the record that claims 1 and 2 are unpatentable over Hart and the 1906 Cyclopedia. Pet. 32–50. Petitioner

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also argues with citations to the record that claims 3–23 and 25–31 are unpatentable over Hart and the 1906 Cyclopedia further combined with either (1) Schuller, (2) Schuller and Karig, (3) Campbell ’652, (4) Wong, (5) Wong and Campbell ’051, or (6) Wong and Schuller. *Id.* at 50–88. Petitioner further argues that claims 32–44 are unpatentable over (1) Lindström, Wong, Ratcliffe 1, and Hart or (2) Lindström, Wong, Ratcliffe 1, Hart, and the 1946 Cyclopedia. *Id.* at 89–123.

For the benefit of the parties, we provide below our preliminary analysis of the other challenged independent claims based on the record before us.

1. *Claim 1*

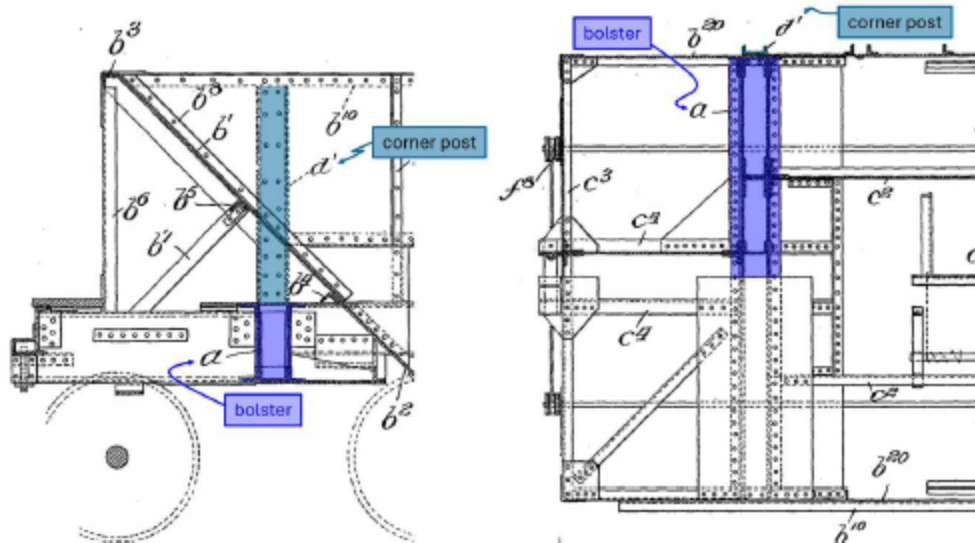
Petitioner argues with citations to the record that its proposed combination of Hart and the 1906 Cyclopedia would have rendered obvious claim 1. Pet. 32–50.

Claim 1 recites, *inter alia*, “said bolster has first and second laterally outboard distal ends, and said hopper car has *corner posts extending upwardly from said distal ends of said bolster to said first end slope sheet.*” Ex. 1001, 23:48–51 (emphasis added). Petitioner argues that supporting post *d*’ of Hart discloses the claimed “corner posts.” Pet. 48 (citing Ex. 1008, Figs. 1, 3); *see also id.* at 2 (labeling the limitations “1h”). Reproduced below are Figures 1 and 3 from Hart annotated by Petitioner.

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Figures 1 and 3 show “a longitudinal elevation, partly in section” and “a plan view of a portion” of Hart’s car with Petitioner’s labels for “bolster” and “corner post.” Pet. 48; Ex. 1008, 1:17–19, 1:21–22. In arguments for the “first end slope sheet” of claim 1, Petitioner contends that “Hart also discloses the claimed end slope sheets, *e.g.*, where it states that ‘*b*’ represents the inclined ends of the car and *b*² the inclined ends of the hopper bottom.” Pet. 33–34 (citing Ex. 1008, 2:46–48).

Based on the preliminary record, we agree with Patent Owner that “the structures in Hart that Petitioner identifies as ‘corner posts’ extend to the structure *b*¹⁰ and not to the structure Petitioner identifies as an ‘end slope sheet.’” Prelim. Resp. 29 (citing Ex. 2035 ¶ 84).

The limitation requires “corner posts extending upwardly from said distal ends of said bolster to said first end slope sheet.” Ex. 1001, 23:49–51. Petitioner insufficiently explains how post *d*’ “extend[s] upwardly . . . to said first end slope sheet” asserted to be disclosed by inclined end *b*’ and hopper bottom inclined end *b*². Pet. 33–34, 48. Petitioner does not cite to further

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evidence, such as testimonial evidence, to support its argument. *See id.* at 33–34, 48.

Hart states that:

Suitably secured to the bolsters at each side of the car are posts or stakes *d'* shown in Figs. 1 and 3 as formed of channel beams and to these posts are connected the plate girder sides *b*, these plate girder sides having a lower longitudinal member *b*⁹ and an upper member *b*¹⁰ formed of channel iron.

Ex. 1008, 1:34–41. Hart, thus, shows and expressly indicates that posts *d'* extend upwardly outboard of inclined end *b'* and past inclined end *b'* to upper member *b*¹⁰. *Id.* at 1:34–41, Figs. 1, 3. Petitioner's own annotated Figures 1 and 3 appear to agree that posts *d'* extend upwardly outboard of and above inclined end *b'*. Pet. 48. Hart does not show, and Petitioner does not sufficiently explain how, posts *d'* extend upwardly to inclined end *b'*. *See* Ex. 1008, 1:34–41, Figs. 1–6. At this stage, we question whether Petitioner shows that its proposed combination of Hart and the 1906 Cyclopedia teaches or suggests all the limitations of claim 1.

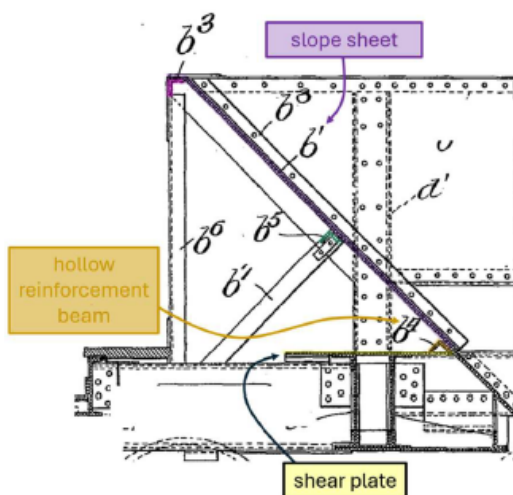
2. Independent Claim 7

Petitioner argues with citations to the record that its proposed combination of Hart, the 1906 Cyclopedia, and Wong would have rendered obvious independent claim 7. Pet. 58–64.

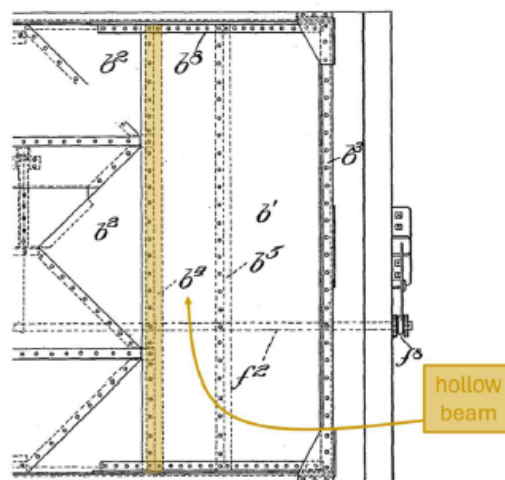
Claim 7 recites, *inter alia*:

a first laterally extending reinforcement mounted crosswise to said first end slope sheet adjacent to said shear plate;
said shear plate of said first end section being connected to said first laterally extending reinforcement;
said first end slope sheet of said first end section being connected to said first laterally extending reinforcement;
said *first laterally extending reinforcement* defining part of a first hollow section beam *extending across said hopper car between said first and second side walls*.

Petitioner argues that “[t]he ’515 patent discloses a laterally extending hollow reinforcement beam that is connected to both the slope sheet and the shear plate.” Pet. 60 (citing Ex. 1001, 3a); *see also id.* at 4 (labeling the limitations “7f”). Petitioner also argues that transverse member b^4 of Hart that supports the ends of its car discloses the above-quoted limitations. *Id.* at 60–61 (citing Ex. 1008, 2:48–57, Figs. 1, 2). Reproduced below are Figures 1 and 2 of Hart with Petitioner’s annotations.



Hart Fig. 1

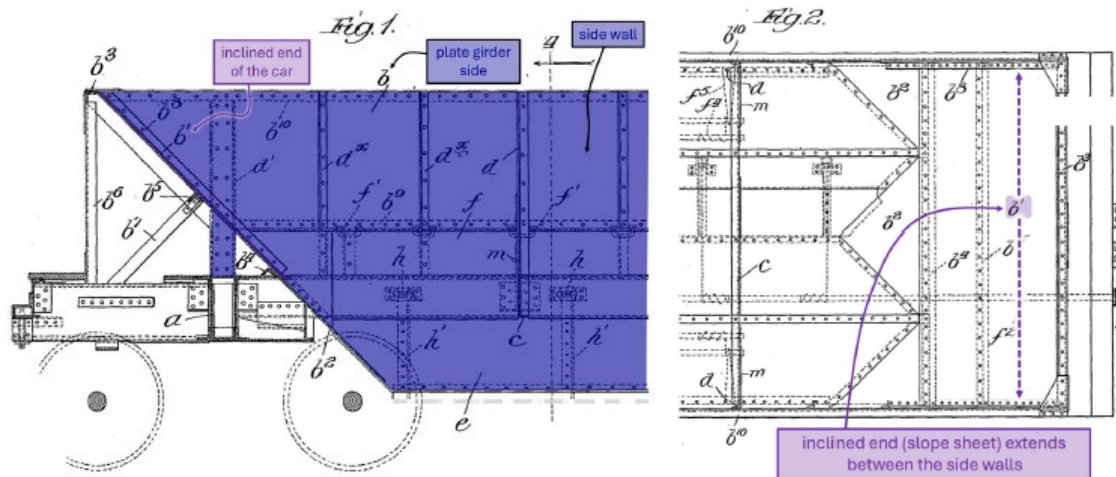
**Hart Fig. 2**

Figures 1 and 2 show “a longitudinal elevation, partly in section” and “a plan view of a portion of one end” of Hart’s car with Petitioner’s labels for “slope sheet,” “hollow reinforcement beam,” “shear plate,” and “hollow beam.” Pet. 60–61; Ex. 1008, 1:17–21.

Based on the preliminary record, we agree with Patent Owner that “Hart’s crosswise beam b^4 does not extend between the side walls, but, instead, sits between the outside edges of the hopper, with no side sheet abutting them,” and Petitioner fails to explain why beam b^4 meets “a first

hollow section beam extending across said hopper car between said first and second side walls.” Prelim. Resp. 37–38 (citing Pet. 59; Ex. 2035 ¶ 107).

Claim 7 requires a “first laterally extending reinforcement defining part of a first hollow section beam extending across said hopper car between said first and second side walls.” Ex. 1001, 24:54–56. In arguments for the “side walls” of claim 7, Petitioner contends that Hart discloses “first and second side walls running lengthwise along first and second sides of said car, said first end slope sheet of said hopper extending cross-wise between said first and second side walls.” Pet. 59. Reproduced below are Figures 1 and 2 of Hart with Petitioner’s annotations.



Figures 1 and 2 show “a longitudinal elevation, partly in section” and “a plan view of a portion of one end” of Hart’s car with Petitioner’s labels for “inclined end of the car,” “plate girder side,” “side wall,” and “inclined end (slope sheet) extends between the side walls.” Pet. 59; Ex. 1008, 1:17–21. Taking together Petitioner’s arguments for the recited “side walls” and “first laterally extending reinforcement,” Petitioner insufficiently argues that the asserted “laterally extending reinforcement” of Hart (transverse member b^4) extends between the asserted “side walls” of Hart (plate girder side b).

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Pet. 59, 60–61. Petitioner does not cite to further evidence, such as testimonial evidence, to support its argument. *See id.* at 59, 60–61.

Thus, based on the preliminary record, Petitioner does not appear to show that its proposed combination of Hart, the 1906 Cyclopedia, and Wong teaches or suggests all the limitations of independent claim 7.

3. *Independent Claim 18*

Petitioner argues with citations to the record that its proposed combination of Hart, the 1906 Cyclopedia, Wong, and Campbell '051 would have rendered obvious independent claim 18. Pet. 83–86.

Claim 18 recites, *inter alia*:

a first laterally extending reinforcement mounted cross-wise to said first end slope sheet adjacent to said shear plate;
said shear plate of said first end section being connected to said first laterally extending reinforcement;
said first end slope sheet of said first end section being connected to said first laterally extending reinforcement;
said first laterally extending reinforcement defining part of a first hollow section beam extending across said hopper car between said first and second side walls.

Ex. 1001, 26:11–20 (emphases added).

For the limitations quoted above, Petitioner refers to its arguments for similar limitations in claim 7. Pet. 84; *see also id.* at 7 (labeling the limitations “18f”). Patent Owner also refers to its previous responsive arguments. Prelim. Resp. 56 (citing Ex. 2035 ¶ 164).

For the reasons stated above for claim 7, based on the preliminary record, Petitioner does not appear to show that the asserted “laterally extending reinforcement” of Hart (transverse member b^4) extends between the asserted “side walls” of Hart (plate girder side b), as required by claim 18. Pet. 59, 60–61, 84. Thus, at this stage, we question whether

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Petitioner shows that its proposed combination of Hart, the 1906 Cyclopedia, Wong, and Campbell '051 teaches or suggests all the limitations of independent claim 18.

4. *Independent Claim 20*

Petitioner argues with citations to the record that its proposed combination of Hart, the 1906 Cyclopedia, and Wong would have rendered obvious independent claim 20. Pet. 72–75.

Claim 20 recites, *inter alia*:

said main bolster of said first end section of said railroad hopper car has first and second ends at laterally outboard extremities thereof;

said hopper car has first and second corner posts mounted at said first and second ends of said main bolster of said first end section, said *corner posts extending upwardly from said main bolster to said first end slope sheet*.

Ex. 1001, 27:28–34 (emphasis added).

For the limitations quoted above, Petitioner refers to its arguments for claim 1 that Hart discloses similar limitations recited by that claim. Pet. 74; *see also id.* at 10 (labeling the limitations “20h”). Patent Owner also refers to its previous responsive arguments. Prelim. Resp. 47 (citing Pet. 74; Ex. 2035 ¶ 138).

For the reasons stated above for claim 1, based on the preliminary record, it appears Petitioner may not have shown that post *d*’ “extend[s] upwardly from said main bolster to said first end slope sheet,” as required by claim 20. Pet. 33–34, 48, 74. Thus, at this stage, we question whether Petitioner shows that its proposed combination of Hart, the 1906 Cyclopedia, and Wong teaches or suggests all the limitations of independent claim 20.

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5. *Independent Claim 32*

Petitioner argues with citations to the record that its proposed combination of Lindström, Wong, Ratcliffe 1, and Hart would have rendered obvious independent claim 32. Pet. 89–102.

Claim 32 recites, *inter alia*:

said first end section includes an end post extending upwardly of said draft sill, said end post being mounted above said draft sill distant from said truck center and proximate said striker end;

said end post extending upwardly to meet said first beam and said top chord;

Ex. 1001, 30:1–6 (emphasis added).

Petitioner argues that Ratcliffe 1 discloses a hopper car with “three end posts extending from the laterally outboard margin of the shear plate to the lower margin of the end wall” with a central post “positioned above the draft sill.” Pet. 98–99 (citing Ex. 1003 ¶ 130; Ex. 1017, 55); *see also id.* at 15 (labeling the limitations “32i”). Petitioner proposes modifying “Lindström to incorporate an end post like the central end post in Ratcliffe 1 (either alone or with an end post on each side) to support the longitudinal end of the rail car.” *Id.* at 99 (citing Ex. 1003 ¶ 131). According to Petitioner, “the end wall creates extra loads at the end of the car, compared to designs where the slope sheet extends to the end top chord.” *Id.* (citing Ex. 1003 ¶ 131).

Petitioner argues that one of ordinary skill in the art “would have been motivated to place the base of the end post as close as possible to the outboard margin of the draft sill, as in Ratcliffe 1, to maximize the usable space of the shear-plate platform.” Pet. 99–100 (citing Ex. 1003 ¶ 131). Petitioner also argues that “the end post would be proximate Lindström’s

striker and distant from Lindström's truck center." *Id.* at 100 (citing Ex. 1005, Fig. 6). Reproduced below is Figure 6 of Lindström with Petitioner's annotations.

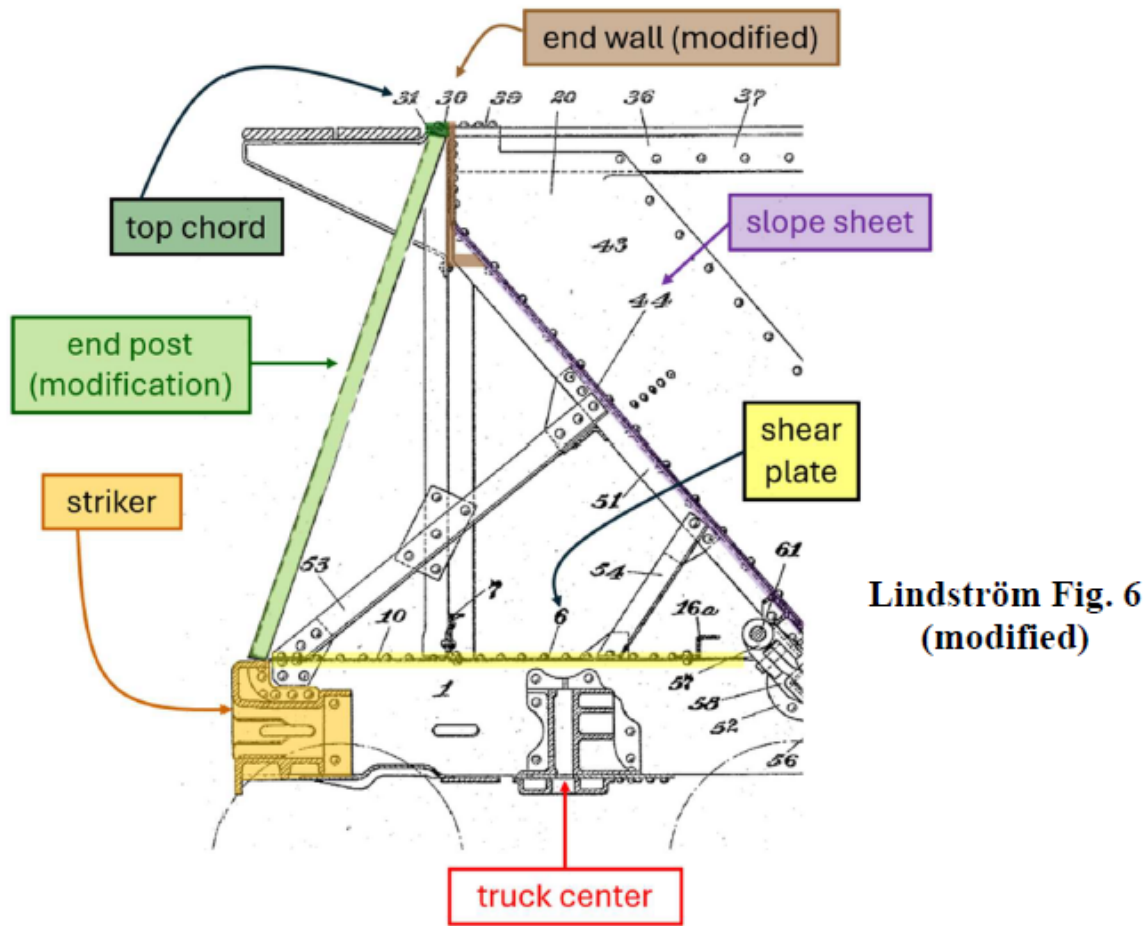


Figure 6 of Lindström shows “an enlarged longitudinal sectional view of a portion of the length” of Lindström's car with Petitioner's modified end wall, added end post, and labels for “end wall (modified),” “slope sheet,” “shear plate,” “truck center,” “striker,” “end post (modification)” and “top chord.” Pet. 100; Ex. 1005, 1:60–62. The annotated figure also shows Petitioner's proposed modification of Lindström in view of Wong so that the proposed combination has “a first beam extending cross-wise between said first and second side walls at said first junction of said uppermost margin of

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said first end slope sheet and said first end wall, said first beam being a beam of hollow section.” Pet. 95–97.

Based on the preliminary record, we agree with Patent Owner that Ratcliffe 1 does not teach or suggest the “end post extending upwardly to meet said first beam and said top chord,” and, thus, the proposed combination would not have the recited “end post.” Prelim. Resp. 60–61 (citing Pet. 99; Ex. 2035 ¶¶ 179, 180). We also agree with Patent Owner that the proposed combination does not have an “end post extending upwardly to meet said first beam,” because the alleged end post meets the alleged top chord and end wall, not a “first beam.” *Id.* at 61–62 (citing Pet. 98–100; Ex. 1003 ¶¶ 130–131; Ex. 2035 ¶¶ 181, 185).

Even if we agreed that one of ordinary skill in the art would have made the proposed modifications to Lindström, Petitioner’s modifications, as shown in its annotated Figure 6 of Lindström, does not appear to have the end post of Ratcliffe 1 “extending upwardly to meet said first beam and said top chord,” as required by claim 32. Pet. 100. As Petitioner’s annotated figure shows, the added end post meets a top chord, but not the asserted first beam. *See id.* Petitioner and its declarant also do not explain how the added end beam meets the asserted first beam and the top chord. *Id.* at 98–100; Ex. 1003 ¶¶ 130, 131.

Thus, at this stage, we question whether Petitioner shows that its proposed combination of Lindström, Wong, Ratcliffe 1, and Hart teaches or suggests all the limitations of independent claim 32.

F. Remaining Arguments

Patent Owner contends that Petitioner and its declarant “amend the exhibits of the asserted art to add details that are not present.” Prelim. Resp. 2. We agree with Petitioner that Patent Owner does not elaborate

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further on its contention and “never provides any example of an exhibit that Petitioner supposedly ‘amended.’” Paper 18, 1.

Patent Owner, in its Preliminary Sur-Reply, identifies Exhibit 1004. Paper 22, 1–3. As summarized above, Exhibit 1004 is the 1946 Cyclopedia, and that reference is asserted in combination with Lindström, Wong, Ratcliffe 1, and Hart against dependent claims 35–44. The parties’ dispute regarding Exhibit 1004 does not affect our determination above regarding claim 24 and, thus, our determination that Petitioner shows a reasonable likelihood that it would prevail in its challenge to claim 24.

Patent Owner also contends that Petitioner’s declarant did not consider whether the claimed invention as a whole would have been obvious and ignored certain limitations of claim 1. Prelim. Resp. 13–14; Paper 22, 3–4. Patent Owner, thus, argues that his testimony should not be given any weight. Prelim. Resp. 14; Paper 22, 4. Petitioner, however, provides citations to his testimony that demonstrate all claim limitations were considered and the claims as a whole were also considered. Paper 18, 2–3 (citing Ex. 1003 ¶¶ 17, 24, 54–59, 68). The parties may further develop this issue during trial.

III. CONCLUSION

After considering the evidence and arguments presented in the Petition and the cited evidence, we determine that Petitioner has demonstrated a reasonable likelihood of prevailing in proving that at least one of claims 1–44 of the ’515 patent is unpatentable, and thus, we institute an *inter partes* review of all challenged claims on all presented challenges. 37 C.F.R. § 42.108(a).

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At this stage of the proceeding, the Board has not made a final determination as to the patentability of any challenged claim or any underlying factual and legal issues.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–44 of U.S. Patent No. 8,132,515 B2 is instituted with respect to all grounds set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of U.S. Patent No. 8,132,515 B2 shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

IPR2025-01047

Patent 8,132,515 B2

FOR PETITIONER:

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Ted M. Cannon

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EXHIBIT 3

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE OFFICE OF THE UNDER SECRETARY OF COMMERCE
FOR INTELLECTUAL PROPERTY AND DIRECTOR OF THE
UNITED STATES PATENT AND TRADEMARK OFFICE

FREIGHTCAR AMERICA, INC.,
Petitioner,

v.

NATIONAL STEEL CAR LIMITED,
Patent Owner.

IPR2025-01046 (Patent 8,166,892 B2)
IPR2025-01047 (Patent 8,132,515 B2)
IPR2025-01048 (Patent 8,132,515 B2)

Before COKE MORGAN STEWART, *Deputy Under Secretary of
Commerce for Intellectual Property and Deputy Director of the United
States Patent and Trademark Office.*

DECISION

Referring the Petitions in IPR2025-01046 and IPR2025-01047 to the Board
and Denying Institution of *Inter Partes* Review in IPR2025-01048.

IPR2025-01046 (Patent 8,166,892 B2)

IPR2025-01047 (Patent 8,132,515 B2)

IPR2025-01048 (Patent 8,132,515 B2)

National Steel Car Limited (“Patent Owner”) filed a request for discretionary denial under seal (Paper 8) as well as a redacted public version (Paper 7, “DD Req.”) in the above-captioned cases, and FreightCar America, Inc. (“Petitioner”) filed an opposition (Paper 12, “DD Opp.”).¹ With authorization, Patent Owner filed a Reply (Paper 13), and Petitioner filed a Sur-reply (Paper 16).

After considering the parties’ arguments and the record, and in view of all relevant considerations, discretionary denial of institution is not appropriate in IPR2025-01046 and IPR2025-01047 but is appropriate in IPR2025-01048. This determination is based on the totality of the evidence and arguments the parties have presented.

The projected final written decision due date in these proceedings is December 18, 2026. DD Req. 3; DD Opp. 3. The district court’s scheduled trial date is January 11, 2027, and the time-to-trial statistics suggest trial will begin in January 2027. DD Req. 3, 16–17; DD Opp. 24; Ex. 2010, 1; Ex. 2011. As such, it is likely that a final written decision in these proceedings will issue before a district court trial occurs. In addition, Petitioner offers persuasive evidence that the district court is likely to stay its proceeding if the Board were to institute trial. DD Opp. 23–24. These considerations weigh against discretionary denial.

Additionally, for the patent challenged in IPR2025-01046, U.S. Patent No. 8,166,892 (“the ’892 patent”), Petitioner provides persuasive reasoning, supported by evidence, that the Office materially erred during prosecution

¹ Citations are to papers in IPR2025-01046. The parties filed similar papers in IPR2025-01047 and IPR2025-1048.

IPR2025-01046 (Patent 8,166,892 B2)

IPR2025-01047 (Patent 8,132,515 B2)

IPR2025-01048 (Patent 8,132,515 B2)

and, accordingly, discretionary denial is not appropriate. Specifically, during prosecution of the '892 patent, the patent examiner indicated that the claims were allowed because “[t]he sidewall stiffener having web continuity . . . is seen as an unobvious improvement over the art of record.” DD Opp. 5; Ex. 1002, 416. Petitioner presents evidence, however, that various editions of the *Car Builder’s Cyclopedia*,² references cited on an Information Disclosure Statement,³ appear to teach ore cars having two-part sidewall stiffeners with web continuity. DD Opp. 12–17.⁴ Thus, Petitioner persuasively demonstrates that the patent examiner overlooked certain teachings of the *Car Builder’s Cyclopedia* that appear to disclose the allowable features of the claims. *Id.* at 14–15; *see* Pet. 13–14. Accordingly, Petitioner appears to show a material error by the Office, and it is an appropriate use of Office resources to review the potential error.

The patent challenged in IPR2025-01047, U.S. Patent No. 8,132,515 (“the ’515 patent”), is a divisional of the ’892 patent, and it is an efficient use of Board resources to address the related patent under these circumstances.

² *Car Builders’ Cyclopedia of Am. Practice* 313–320 (Roy v. Wright et al eds., 14th ed. 1937); *Car Builders’ Cyclopedia of Am. Practice* 281–289 (Roy v. Wright et al eds., 16th ed. 1943); *Car Builders’ Cyclopedia of Am. Practice* 264–272 (C. L. Combes et al eds., 20th ed. 1957); *Car Builders’ Cyclopedia of Am. Practice* 246–258 (C. L. Combes et al eds., 21th ed. 1961).

³ Ex. 1002, 280 (Information Disclosure Statement).

⁴ Petitioner also provides evidence that the 1946 edition of *Car Builders’ Cyclopedia of Am. Practice* (Roy v. Wright et al eds., 17th ed. 1946) (Ex. 1004) shows Patent Owner’s own design (“NSC car”), which also teaches this limitation. DD Opp. 8 (citing Ex. 1004, 290, 292, 294), 11–14; Pet. 13–14, 19–33.

IPR2025-01046 (Patent 8,166,892 B2)

IPR2025-01047 (Patent 8,132,515 B2)

IPR2025-01048 (Patent 8,132,515 B2)

The Petition in IPR2025-01048 is the second petition filed by Petitioner against the '515 patent, and Petitioner ranks the Petition in IPR2025-01047 above the Petition in IPR2025-01048. *See* IPR2025-01047, Paper 2, 5. In view of this, and the determination to refer the Petition in IPR2025-01047 to the Board, discretionary denial of IPR2025-01048 is appropriate.

Although certain arguments are highlighted above, the determinations in this Decision are based on a holistic assessment of all of the evidence and arguments presented. Accordingly, the Petition in IPR2025-01048 is denied under 35 U.S.C. §314(a), and the Petitions in IPR2025-01046 and IPR2025-01047 are referred to the Board to handle the cases in the normal course, including by issuing a decision on institution addressing the merits and other non-discretionary considerations, as appropriate.

In consideration of the foregoing, it is:

ORDERED that Patent Owner's request for discretionary denial in IPR2025-01048 is *granted*;

FURTHER ORDERED that the Petition in IPR2025-01048 is *denied* and no trial is instituted;

ORDERED that Patent Owner's requests for discretionary denial in IPR2025-01046 and IPR2025-01047 are *denied*;

FURTHER ORDERED that the Petitions in IPR2025-01046 and IPR2025-01047 are referred to the Board; and

FURTHER ORDERED that neither party shall file a request for rehearing or Director Review of the decision to deny Patent Owner's request for discretionary denial in IPR2025-01046 and IPR2025-01047 until the Board issues a decision on institution.

IPR2025-01046 (Patent 8,166,892 B2)

IPR2025-01047 (Patent 8,132,515 B2)

IPR2025-01048 (Patent 8,132,515 B2)

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EXHIBIT 4

CONFIDENTIAL – ATTORNEYS’ EYES ONLY

**UNITED STATES DISTRICT COURT FOR THE
DISTRICT OF DELAWARE**

NATIONAL STEEL CAR LIMITED,)	
)	
Plaintiff,)	
)	
v.)	C.A. No. 24-00594-JLH-CJB
)	
FREIGHTCAR AMERICA INC.,)	
)	
Defendant.)	

**PLAINTIFF NATIONAL STEEL CAR LIMITED’S
INITIAL CLAIM CHARTS**

Pursuant to Section 6(d) of the Court’s Scheduling Order (D.I. 38), Plaintiff National Steel Car Limited (“NSC”) hereby provides “an initial claim chart relating each known accused product to the asserted claims each such product allegedly infringes.” As used herein, the “’515 Patent” refers to U.S. Patent No. 8,132,515 and the “’892 Patent” refers to U.S. Patent No. 8,166,892, and both are collectively referred to as the “Asserted Patents.”

The “Accused Products” include the products identified in NSC’s January 16, 2025 Disclosures Pursuant to the Court’s Scheduling Order and ESI Order, including the 600 railcars numbered DMIR 80,000-80,599 for use on the DMIR made, used, sold, offered for sale, or imported by Defendant FreightCar America, Inc. (“FreightCar”). Exhibit A includes the Initial Claim Charts for the ’515 Patent. Exhibit B includes the Initial Claim Charts for the ’892 Patent.

Asserted Patent	Asserted Claims	Claim Chart
’515 Patent	1 and 3-44	See Exhibit A
’892 Patent	1-6 and 8-15	See Exhibit B

These Initial Claim Charts are based at least in part on the limited “core technical documents” produced to date by FreightCar. (FCA0000001-0000198). This production has been extremely wanting, and NSC has therefore also relied on publicly available documents and

CONFIDENTIAL – ATTORNEYS’ EYES ONLY

CERTIFICATE OF SERVICE

I hereby certify that on March 6, 2025, a true and correct copy of the within document was served on the following counsel of record at the addresses in the manner indicated:

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Dated: March 6, 2025

/s/ Robert D. Keeler
Robert D. Keeler

EXHIBIT 5

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

NATIONAL STEEL CAR LIMITED,)
)
Plaintiff,) C.A. No. 24-594-JLH-CJB
v.)
)
FREIGHTCAR AMERICA, INC.,)
FREIGHTCAR NORTH AMERICA,)
LLC, JAC OPERATIONS, INC.,)
AND FCAFASEMEX, LLC,)
)
Defendants.)
)
FREIGHTCAR AMERICA, INC.,)
FREIGHTCAR NORTH AMERICA,)
LLC, JAC OPERATIONS, INC.,)
AND FCAFASEMEX, LLC,)
)
Plaintiffs,)
)
v.)
)
NATIONAL STEEL CAR LIMITED,)
)
Defendant.)

Tuesday, November 18, 2025
11:00 a.m.
Markman Hearing

844 King Street
Wilmington, Delaware

BEFORE: THE HONORABLE CHRISTOPHER J. BURKE
United States Magistrate Court Judge

1 APPEARANCES:

2
3 SHAW KELLER
4 BY: ANDREW E. RUSSELL, ESQ.

5 -and-

6 ICE MILLER
7 BY: KENNETH SHEEHAN, ESQ.
8 BY: ROBERT KEELER, ESQ.
9 BY: KEVIN ADAMS, ESQ.

10 Counsel for the Plaintiff National
11 Steel Car Limited

12 PHILLIPS, MCLAUGHLIN & HALL, P.A.
13 BY: DAVID A. BILSON, ESQ.

14 -and-

15 KNOBBE, MARTENS
16 BY: SEAN MURRAY, ESQ.
17 BY: JUSTIN GILLET, ESQ.

18 Counsel for the Defendants
19 FreightCar America, Inc., FreightCar North
20 America, LLC, JAC Operations, Inc., and
21 FCA-FASEMEX LLC

22 - - - - -

23 P R O C E E D I N G S

24 (Proceedings commenced in the courtroom beginning at
25 11:00 a.m.)

1 **THE COURT:** Please be seated, everybody. All
2 right. We have counsel here for both sides with us, and
3 we have our court reporter. We thank our court reporter
4 for her help today, as always.

5 And so with that said, now let's go on the
6 record in this matter. And as we are now on the record,
7 let me say a few things for the record.

8 The first is that we're here today in the
9 matter captioned Civil Action Number 24-594-JLH-CJB here
10 in our Court. It's National Steel Car Limited versus
11 Freightcar America, Inc., et al. And we're here for our
12 *Markman* hearing.

13 Before we go further, let's have counsel for
14 each side identify themselves for the record. We will
15 start first with the plaintiff's side. We will start
16 with Delaware counsel.

17 Mr. Russell, good morning.

18 **MR. RUSSELL:** Good morning, Your Honor.
19 Andrew Russell from Shaw Keller for plaintiff National
20 Steel Car. And with me at counsel table are Kenneth
21 Sheehan, Robert Keeler, and Kevin Adams. Mr. Keeler
22 will be handling the first two terms, and Mr. Adams will
23 be handling the third.

24 **THE COURT:** All right. Thank you welcome to
25 you all.

1 sill.

2 Column 14 that we cited, and discussed in our
3 briefing, says it extends from side sill to side sill.
4 Because that is not true of Figure 1, that is a separate
5 embodiment, in our view.

6 **THE COURT:** Okay. All right. Fair enough.
7 Thank you.

8 **MR. MURRAY:** Thank you, Your Honor.

9 **THE COURT:** All right. Then, lastly, let's
10 turn to Term 3. And we'll give you five minutes before
11 we conclude.

12 And I'll call up plaintiff's counsel, which I
13 think is going to be Mr. Adams. Welcome.

14 **MR. ADAMS:** Thank you. Kevin Adams.

15 **THE COURT:** Mr. Adams, you may have drawn a
16 short straw here because Term 3 was an example -- this
17 is a tough one in briefing -- where, essentially, the
18 defendant says, listen, the impetus for my position is
19 X. I'm just telling you why it is we've taken this
20 position.

21 **MR. ADAMS:** Sure.

22 **THE COURT:** And then the plaintiff says
23 nothing about that and pretends like the defendant never
24 said it and the briefing ends.

25 Then it's like -- I'm not saying you're

1 responsible for that. I'm just saying -- because I think
2 what happened here -- and then it's like, for the
3 defendant and for me, gee, what's the plaintiff's view
4 about that? I don't know. They didn't say anything. So
5 that when they get up and argue, they can say whatever
6 they want. That's bad.

7 And so I think that's what happened here, but
8 maybe you can tell me otherwise. Because I think the
9 defendant -- we know that, I think, when it comes to this
10 term, and I think probably the parties' respective claim
11 construction proposal set out, among other places in the
12 box on Page 44 of the claim construction brief -- it
13 seems like the key dispute is over the defendants'
14 addition of the language "whether or not bent" in their
15 proposed construction, along with the dispute about
16 exactly what should be the claim term that's being
17 construed.

18 Does that seem right?

19 **MR. ADAMS:** Yes, that's correct.

20 **THE COURT:** Okay. And we know that the
21 defense says, look, the whole reason why we're putting
22 forward this claim construction dispute, the whole
23 reason why we are proposing this additional language is
24 that we have a concern, and the concern is that if the
25 plaintiff's contrary position were adopted, that it

1 would take the position that the relevant stiffener --
2 because I think, is it right, that this relates to
3 Claim 15 of the '892 patent?

4 **MR. ADAMS:** Correct.

5 **THE COURT:** And the phrase, if it was made of
6 flat bar, or "flat bar" is modifying the term "portions
7 of said sidewall stiffener." Right?

8 **MR. ADAMS:** Yes.

9 **THE COURT:** So I think the question is those
10 portions are supposed to be made of flat bar, what does
11 that mean? And the defendants' position was, look,
12 we're worried that the plaintiff is going to argue that
13 if their construction is adopted, something can't be
14 made of flat bar if it's bent, to which I think in the
15 briefing plaintiff said nothing.

16 So that's my first question to you, which is:
17 Is that your view, if your position is adopted, could
18 something be flat bar or made of flat bar if, in the
19 accused product, it's bent?

20 **MR. ADAMS:** Uhmm, I think it comes down to
21 what "made of" means, right? Made of flat bar.

22 So, you know, if a flat bar is, as the parties
23 agree, a flat piece of steel with a largely rectangular
24 cross-section, you know, something that's made of that, I
25 mean, sure, it could conceivably be bent.

1 **THE COURT:** So I think your answer is, "No,
2 don't worry, defendant, we're not going to take the
3 position that something isn't flat bar or maybe even
4 made of flat bar, if in the ultimate accused product
5 that it's bent; i.e., the thing you're saying,
6 defendant, in the briefing, the reason why you're
7 raising this claim construction dispute and including
8 this phraseology in your construction is actually not a
9 concern. We're not even having an argument or a dispute
10 about that.

11 Is that what you're saying?

12 **MR. ADAMS:** Yes, but I'll add the caveat that
13 plaintiff doesn't intend to preclude itself from making
14 any arguments at trial that it may want to make, you
15 know. It's over a year away at this point. We don't
16 want to preclude ourselves from being able to make that
17 argument if we want to. But at this point, no, we don't
18 see why that's an issue.

19 **THE COURT:** So is what you're saying, like,
20 sitting here today, I don't think we're going to make
21 that argument, but I'd like flexibility to change my
22 mind and make it?

23 **MR. ADAMS:** Yes, Your Honor.

24 **THE COURT:** So then we maybe do have a
25 dispute. Let me ask you this way: In our

1 meet-and-confer, after the briefing was concluded, after
2 the plaintiff didn't respond to this concern of the
3 defendant in the briefing -- would you acknowledge that
4 you didn't address that concern in the briefing or do
5 you think you did address it?

6 **MR. ADAMS:** I do not believe we specifically
7 addressed it, but I do think that our arguments made it
8 unnecessary, which I'm happy to expand on, if you wish.

9 **THE COURT:** Okay. All right. Well, I will
10 certainly let you. But when this came up in the
11 meet-and-confer, what did you say?

12 **MR. ADAMS:** I was not present at that
13 meet-and-confer, so I cannot say for certain.

14 **THE COURT:** Got it.

15 Okay. Well, then -- you just said something
16 like, look, I don't even think their concern is
17 implicated. Let me have an idea, give your view about
18 all of that.

19 **MR. ADAMS:** So you're referring to
20 defendants' argument about jury confusion. They're
21 worried about jury confusion.

22 **THE COURT:** I'm talking about the whole
23 reason why we're even, like, speaking words right now.
24 Right? We're here because the parties had told me that
25 they have a claim construction dispute about this term.

1 The question is: What dispute? What is
2 giving rise to the dispute? Where did the parties
3 disagree?

4 If there was no dispute, we wouldn't be
5 standing here right now. I wouldn't have spent time
6 reading these briefs. We wouldn't be having this
7 argument.

8 To make sure there's a dispute, I require that
9 the parties meet and confer twice, both before they file
10 the briefing and then afterwards. The parties did that,
11 told me they met for ten minutes.

12 Again, sometimes you let that slide. Man,
13 these parties, maybe they've had detailed discussions in
14 the past of their claim construction positions, you know.
15 So it doesn't make any sense for them just to sit there
16 for an hour in a meet-and-confer and just say the same
17 things over and over again they said before. Totally
18 understand that.

19 But if you're going to tell me you met and
20 conferred for ten minutes, that better be the case. You
21 better not get to the *Markman* hearing and decide to get
22 up and say I don't know if we have a dispute, right?
23 That would be bad.

24 And I would wonder if that's what's happening
25 here. It may not be happening. I think you're going to

1 maybe tell me why it's not happening. But it seems like
2 it's happening, and that's worrisome.

3 So that's what I'm asking you about. I'm
4 asking you about the only thing that is said in the
5 briefing to be the dispute between the parties to have
6 given rise to this claim construction dispute, what is
7 your response as to whether or not you have a dispute or
8 not about that and/or why it is that the defendants'
9 concern is obviated by your position.

10 **MR. ADAMS:** Sure. So as you said earlier,
11 our dispute largely centers around the end of
12 defendants' proposed construction whether or not bent.
13 And our position is that that addition, or that part of
14 the construction has no support in the specification.
15 And claim construction isn't borne out of, you know --
16 it starts in the specification, right?

17 You look at the specification, figure out what
18 the claim terms mean. And, sure, they might have some
19 sort of concern about jury confusion. But our point is,
20 you know, if they can't base their construction on
21 anything that's in the specification, we don't know how
22 it's supported. We don't know how they can bring that
23 argument.

24 **THE COURT:** Let me be clear. To the extent
25 I'm making some comments about the meet-and-confer

1 process, I am not talking to you. I don't blame you at
2 all. You weren't even on it. I just want you to know
3 that. I appreciate your helping me try to work through
4 it now.

5 So let me ask you this way. I think -- there
6 seems to be -- their proposal, literally, is that -- now,
7 they want to construe the term "made of flat bar." But I
8 think, ultimately, we're talking about what this flat bar
9 means because I think what we're talking about is, what
10 is the thing that exists at the point in which we're
11 going to start making something?

12 Does that seem right to you?

13 **MR. ADAMS:** Yes.

14 **THE COURT:** The thing that is the starting
15 point before we start making it.

16 **MR. ADAMS:** Yes.

17 **THE COURT:** I think that's part of your view
18 is, like, that's why we should be construing "flat bar"
19 because we're talking about the input --

20 **MR. ADAMS:** Yes.

21 **THE COURT:** -- is then used to make
22 something. Right?

23 **MR. ADAMS:** Yes.

24 **THE COURT:** And the thing we're trying to
25 make here is the proportions of the stiffener; is that

1 right?

2 **MR. ADAMS:** Yes.

3 **THE COURT:** And so is your position that that
4 thing, the thing that's our starting point, that thing
5 itself cannot be bent? It, instead, is a thing that is
6 a flat piece of steel with a largely rectangular cross
7 section?

8 **MR. ADAMS:** Correct, Your Honor.

9 **THE COURT:** Could the thing be bent?

10 **MR. ADAMS:** The flat bar itself may not be
11 bent. But whether something made of flat bar is bent is
12 a different issue.

13 **THE COURT:** Different issue?

14 **MR. ADAMS:** Yes.

15 **THE COURT:** But flat bar, because if it were
16 bent, it wouldn't be a flat piece of steel?

17 **MR. ADAMS:** Correct.

18 **THE COURT:** Okay. Say the defendant agrees
19 with that. Say the defendant is like, look, we're not
20 fighting that the flat bar, before we physically,
21 metaphysically get to the moment in which we start
22 making the stiffener, we're not fighting that that's
23 flat and not bent. We agree with you, it has to be
24 flat, can't be bent.

25 All we're worried about is, we're worried

1 about when something is made of flat bar, like after the
2 making process for this portion of the stiffener is
3 finished, then they say, I think we think it can be bent.
4 And they point to a couple examples, one of which is, I
5 think, an example of a stiffener, another of which is an
6 example of something that's utilizing flat bar that are
7 depicted in the patent that do seem to be like not flat.

8 **MR. KEELER:** Uh-huh.

9 **THE COURT:** They say, see? What is your
10 response to that? Is your response, no, look, I'm not
11 fighting with you right now. Yeah, something could be
12 made of flat bar and be bent a bit. That's not our
13 concern. Our concern is that plaintiff is just
14 establishing that the flat bar, when you start it has to
15 be flat and not bent?

16 **MR. ADAMS:** Yes. The thing that you start
17 with, the input, as you stated earlier, yes, has to be a
18 flat bar. It cannot be bent.

19 Where I will differ from you here is on the
20 evidence cited by defendants in their brief. As you
21 stated, they cite one figure which shows the stiffeners,
22 which I believe is Figure 2, 2a maybe.

23 **THE COURT:** I think they are trying to say on
24 Page 46, that the thing that's depicted there as being
25 in Figure 2c.

1 **MR. ADAMS:** Yes, 2c.

2 **THE COURT:** The blue part at the top and the
3 green part at the bottom, they are both portions of the
4 relevant stiffener that are depicted; is that right?

5 **MR. ADAMS:** Yes. And the stiffeners are what
6 this claim go to. Correct? Claim 15 of the '892 is
7 referring to the stiffener are made of flat bar.

8 **THE COURT:** Right.

9 **MR. ADAMS:** And then you see in that figure,
10 that those -- those stiffeners are flat. They are
11 unbent, correct?

12 **THE COURT:** Well, that's the question I had.
13 Are they?

14 I mean, I get that, you know, the defendant
15 puts another picture of Figure 7a and b. Now, those
16 aren't said to be our -- an example of our claim
17 stiffeners. I think those are talking about certain
18 things that are called transmission members. Which
19 are -- they're a different thing?

20 **MR. ADAMS:** Yes.

21 **THE COURT:** But I think they're saying, look,
22 the patent talks about those things as being welded flat
23 bars, which is kind of similar to "made of flat bar," I
24 guess.

25 **MR. ADAMS:** Uh-huh.

1 **THE COURT:** And, look, they're bent. So,
2 again, another piece of evidence, maybe not quite as on
3 point, is if you were looking at a depiction of a
4 stiffener to make that point.

5 But I think you're right, that the only
6 depiction they point to of the stiffener is the one in
7 Figure 2c. It's not like that thing is in a straight
8 line, it's angled, for sure. You are saying that's not
9 bent?

10 **MR. ADAMS:** No, I do not believe it's bent.
11 I can't say I know exactly how that piece is
12 manufactured. To me, it looks like it's machined,
13 right? Like it started with a rectangular piece of
14 steel and then was shaped into those final
15 configurations.

16 **THE COURT:** Again, the thing you're talking
17 about is not what it looks like now, but what it looked
18 like before they started the making process, right?

19 **MR. ADAMS:** Yes.

20 **THE COURT:** Because that's what you're really
21 concerned with --

22 **MR. ADAMS:** Yes. Correct, Your Honor.

23 **THE COURT:** -- if this is depicting the end
24 of the making process in Figure 2c.

25 **MR. KEELER:** Uh-huh.

1 **THE COURT:** And even if it were bent. Or
2 something that was not, quote, "flat," you would say
3 that doesn't implicate our proposed construction because
4 our proposed construction is talking about what this
5 stuff looked like -- this material looked like before
6 the making, right?

7 **MR. ADAMS:** Sure.

8 **THE COURT:** Okay.

9 Anything further that you want to add on this
10 term?

11 **MR. ADAMS:** I think the only other point I
12 would want to add, going to the second figure,
13 Figure 7a, with the transmission members, plaintiff's
14 don't agree that those are necessarily bent. As you can
15 see, the specification describes them as welded.

16 So we don't think there's anything explicit
17 between the figures or the specification there that shows
18 that they're actually bent, you know. For example, they
19 could be cut and rewelded at that angle or, you know,
20 they're not actually -- they don't actually go through
21 any bending.

22 **THE COURT:** But if, I mean, who knows, right?

23 **MR. ADAMS:** Sure.

24 **THE COURT:** Sure seemed like -- if you think
25 of something that's a piece of steel and say it was

1 really pliable and I bent it --

2 **MR. ADAMS:** Uh-huh.

3 **THE COURT:** -- it could be very plausible
4 what that looks like.

5 **MR. ADAMS:** Sure. Plausibly.

6 **THE COURT:** You couldn't exclude that
7 possibility.

8 **MR. ADAMS:** Yes.

9 **THE COURT:** Again, that doesn't -- because
10 that's after you make it. That's after you weld -- you
11 weld -- in this case, you weld it, you know, the flat
12 bars. But it's not at the point we care about, which is
13 flat bar, what you start with. Right?

14 **MR. ADAMS:** Sure. Yes.

15 **THE COURT:** Okay. All right. Let me give
16 the other side a chance to discuss this, then I'll give
17 you a chance to make a brief rebuttal.

18 **MR. ADAMS:** Thank you, Your Honor.

19 **THE COURT:** All right. So, Mr. Murray,
20 you're going to get up here and I guess the question is:
21 Do we have a dispute?

22 **MR. MURRAY:** Unfortunately, Your Honor, we
23 do.

24 **THE COURT:** Okay. At least we didn't waste
25 our time.

1 What do you think the dispute is?

2 **MR. MURRAY:** I will go to my one slide where
3 we say: The jury will mistakenly believe that bent
4 structures cannot be made of flat bar. We didn't know
5 at the time.

6 Now, after this hearing, we do know that he
7 wants to reserve the right to argue that if our stiffener
8 has bends in it, even if it was fabricated from flat bar,
9 it is not made of flat bar. They want to reserve the
10 right to make that argument.

11 **THE COURT:** So it's that thing. It's that
12 piece of what Mr. Adams just said, which is -- look, I
13 don't think we're going to argue that, but, you know,
14 we've got to reserve our rights.

15 If they weren't reserving their rights, if
16 they were like, no, we're talking about the flat bar as
17 it exists before the making process starts. And all
18 we're trying to convey is that it has to be a flat piece
19 of steel with a large rectangular cross-section, I think
20 you would agree with that; is that right?

21 **MR. MURRAY:** Yes, Your Honor.

22 **THE COURT:** Okay. So the whole dispute, if
23 there is one, turns on whether or not they are going to
24 take a contrary position about what "flat bar" or "made
25 of flat bar" can be. It sounds like, really, talking it

1 through, right, the dispute really isn't about flat bar.

2 **MR. MURRAY:** No.

3 **THE COURT:** You both agree that the starting
4 material is going to be flat. Heck, it's called "flat
5 bar."

6 **MR. MURRAY:** Yes, Your Honor. In complete
7 agreement about the proper construction of "flat bar."

8 **THE COURT:** It's really "made of."

9 **MR. MURRAY:** Yes.

10 **THE COURT:** That's what your point is?

11 **MR. MURRAY:** Yes, Your Honor.

12 **THE COURT:** Okay. So if that's the right
13 claim term to be concerned with, then the question is:
14 Do we have a dispute about what that means, and we only
15 would if this whole "reserving our rights" thing is
16 their position.

17 Say that it is for purposes of -- I will ask
18 their counsel again in just a second, so we'll discuss
19 it. I want you to be prepared to tell me whether or not
20 you actually have a dispute or we don't. We would have a
21 dispute if they were reserving their rights in that way.
22 We would not have a dispute if they were not taking that
23 position.

24 **MR. MURRAY:** Yes, Your Honor.

25 **THE COURT:** When you talked about this term

1 before the hearing, what did they say about it? Were
2 you on that call?

3 **MR. MURRAY:** I was.

4 **THE COURT:** What did they say about it? They
5 must have said something in there that gave you -- that,
6 yeah, they're going to make this argument. What did
7 they say about it?

8 **MR. MURRAY:** You're testing my memory. We
9 also, same week, we had hours of meet-and-confers on
10 discovery issues.

11 **THE COURT:** Other matters. In any event,
12 we're here now. And, see, it's very difficult because
13 I'm asking you questions. We're going to take time. I
14 already asked you questions. I don't know if we need to
15 be doing this. But hold on one second.

16 **Mr. Keeler.**

17 **MR. KEELER:** Yes, Your Honor.

18 **THE COURT:** Do we have a dispute here? Is
19 the plaintiff's position -- because I'm going to tell
20 you right now, unless there's something I'm missing, I
21 believe that if we had one, then the term at issue would
22 be "made of flat bar," because I think it's undisputed
23 by both sides that flat bar, to the extent it's
24 referring to the material that is utilized before the
25 making process begins, there's no dispute about what

1 that means, that is a flat piece of steel with a largely
2 rectangular cross-section.

3 So I think we would only have a dispute if the
4 plaintiff was taking the position that something could be
5 made of flat bar, that is, the material after the end of
6 the making process, but if the plaintiff's view was that
7 for something to be made of flat bar, that something must
8 be flat and could never be bent.

9 Is that the plaintiff's position or is it not?

10 **MR. KEELER:** Let me just repeat it to Your
11 Honor, that for something to be made of flat bar, it
12 could never be bent.

13 **THE COURT:** To put it differently: The whole
14 thing talked about in the briefs, the whole point of why
15 the defendants raised this -- you know what the issue
16 is. It's been briefed, right?

17 **MR. KEELER:** Yes, Your Honor.

18 **THE COURT:** They believe -- let me just read
19 it. I mean, they say in their briefing: NSC never said
20 it would refrain from expressly arguing to the jury that
21 a structure is not made of flat bar because it is bent.

22 Now, of course, if you were not taking the
23 position that a structure cannot be made of flat bar
24 because it's bent, we wouldn't have a dispute.

25 If you were taking the position, we would have

1 a dispute. It's already been briefed.

2 What is your view?

3 **MR. KEELER:** My view, Your Honor, is that the
4 claim term whether or not bent is superfluous to what
5 "made of" means. And "made of" is there.

6 **THE COURT:** I'm not understanding how that's
7 responsive to the question I'm asking. So let me try to
8 ask it again.

9 Will you be taking the position -- could you
10 potentially argue to a jury that a structure is not made
11 of flat bar because it's bent?

12 We have a bent thing. You're going to say
13 "that can't be made of flat bar because it's bent"? Are
14 you going to take that view?

15 **MR. KEELER:** I don't believe so, Your Honor.

16 **THE COURT:** You aren't going to take it. So
17 there's not going to be a fight about well, is something
18 made of flat bar because it's bent? You're not going to
19 say it's not made of flat bar because it's bent. You're
20 not going to take that view, right? You don't have a
21 dispute about that. It could be. It could be made of
22 flat bar and still be bent.

23 **MR. KEELER:** But, Your Honor, the patent
24 specification never refers to bending. It never refers
25 to anything about what it means to be made of flat bar.

1 It's entitled to its plain and ordinary
2 meaning, what "made of" is. And whether or not "bent" is
3 coming from out of nowhere being inserted into the patent
4 claim by the defendants.

5 **THE COURT:** Why don't you stay up here,
6 Mr. Keeler.

7 Mr. Murray, you can sit down.

8 You know what I'm asking? I spent time
9 reading these briefs. You guys didn't meet and confer
10 about something I asked you to. So we're in bad shape
11 here. We're in bad shape with Term 3 because I'm still
12 sitting here asking you questions about whether we have a
13 dispute, and I'm not getting a straight answer.

14 After it's possible that you wasted all of our
15 time. You wasted time talking about this. So I need to
16 know. And, you know what I'm asking. You know what I'm
17 asking. You know what I need to know.

18 So please tell me the answer to my question.
19 Do we have a dispute, a material dispute about the
20 meaning of the term "made of flat bar"? Do we have one?

21 **MR. KEELER:** I believe so. I do not believe
22 that there is a reason to read the term "whether or not
23 bent" into it.

24 **THE COURT:** So we have a dispute about the
25 meaning of the term "made of flat bar" because, in your

1 view, something cannot be made of flat bar if it is
2 bent?

3 **MR. KEELER:** No. I believe that "whether or
4 not bent" is confusing. It encompasses the entire
5 scenario of things you can do with regard to bending the
6 flat bar, and I don't believe it's helpful for the jury.

7 **THE COURT:** So the -- your position is that
8 the defendants' proposal is not wrong because it's
9 incorrect.

10 Your position is that the defendants' proposal
11 should not be adopted because it would be confusing?

12 **MR. KEELER:** Yes, Your Honor. Because you
13 could say whether or not bent, you could say whether or
14 not welded. We could go down the list of things that
15 you could do to that flat bar.

16 **THE COURT:** But in terms of whether we have a
17 claim construction, *an 02 Micro* dispute, whether there
18 is a reason to engage in claim construction and for the
19 Court to construe a term, what is your argument about
20 it, in light of the parties' respective positions?

21 You're telling me there isn't, there's no
22 dispute here because the parties don't have a fundamental
23 underlying dispute about whether something can be made of
24 flat bar if it's bent. Both sides agree that it could
25 be; is that fair?

1 **MR. KEELER:** Your Honor, I think that's a
2 question for the jury of what "made of" means. It's not
3 something that, you know, defendants are proposing to
4 put the term "whether or not bent" as an expansion of
5 "made of."

6 **THE COURT:** Is what you just said that, no, I
7 think it is very possible that we could argue to a jury
8 that something cannot be made of flat bar if it is bent.

9 **MR. KEELER:** Your Honor, can I get a
10 two-minute recess to discuss with counsel?

11 **THE COURT:** Sure. Why don't you discuss it
12 with your guys.

13 **MR. KEELER:** Thank you.

14 (Brief recess.)

15 **THE COURT:** All right. Now that counsel has
16 further conferred, Mr. Keeler, what's your position?

17 **MR. KEELER:** Yes. Our position, Your Honor,
18 is that we don't understand why defendants want this
19 addition to the claim language. We're not sure why
20 they're seeking to get it. It feels superfluous for us.

21 We don't know why it matters to them that this
22 is added in.

23 **THE COURT:** Okay. All right. Thank you. I
24 think I've got enough to address this term, but I'll
25 give Mr. Murray a chance just to say anything else he

1 wants to add.

2 **MR. MURRAY:** Thank you, Your Honor.

3 **THE COURT:** Mr. Murray.

4 **MR. MURRAY:** I just wanted to make one quick
5 point.

6 Counsel says why "bent"? Why not "welded"?
7 Where does this come from?

8 Our concern is that plaintiff will argue that
9 a structure is not made of flat bar because something
10 that happened after the flat bar was manufactured, it's
11 something that occurred, whether it's welding or bending,
12 et cetera, during the manufacture of the railcar.

13 Because regardless of what happens then, if we
14 started with flat bar, then the structure created with
15 that flat bar is made of flat bar.

16 The reason why we brought up bent --

17 **THE COURT:** Is this related to invalidity
18 dispute or --

19 **MR. MURRAY:** Related to invalidity. Yes.

20 **THE COURT:** Makes more sense. So there's
21 some piece -- again, let me -- by asking these
22 questions, I am not going to make any claim construction
23 decisions that are focused on a piece of art or accused
24 product.

25 I'm simply inquiring, as the Federal Circuit

1 says is permissible, as to how it is in the context of
2 this case, this particular claim construction dispute has
3 come to me. Particularly important to do so here when it
4 seems like you may not have a dispute, at least for our
5 purposes right now.

6 So I think, Mr. Murray, is the deal that
7 there's going to be some piece of art out there, and
8 there's going to be something in the apparatus that's
9 depicted in that piece of art that you're going to point
10 to as a portion of the sidewall stiffener, and that thing
11 may not be totally flat, it may be bent; is that right?

12 **MR. MURRAY:** Yes, Your Honor.

13 In the prior art, there are structures that
14 were formed from flat bars. It was originally flat. It
15 meets the definition that we have for flat bar, but was
16 bent during construction.

17 Our position is that what happens afterwards
18 is irrelevant to what it's made of. And bent is a
19 particularly important thing to address because the jury
20 is going to see that the claim term is "flat bar." And
21 it's not flat.

22 It's easy to see how a jury could mistakenly
23 believe that a bending of that flat bar after the fact
24 somehow means it no longer is made of flat bar.

25 **THE COURT:** When you say "made of flat bar,"

1 what you mean is, if the term is "made of flat bar," I
2 guess whether it's "flat bar" or "made of flat bar,"
3 either way we're talking about the thing, the input, the
4 item that is -- that exists at the beginning of the
5 manufacturing process.

6 **MR. MURRAY:** Yes, Your Honor.

7 **THE COURT:** We are not talking about the
8 outcome because you're saying there might be some piece
9 of art out there that has a thing that is said to be a
10 portion, that after the manufacturing process was over
11 was like a little bent. That could still possibly
12 qualify under the constraints of the term, if they
13 started with a piece of flat bar.

14 **MR. MURRAY:** If they started with a piece of
15 flat bar, it could be very bent. It could be very bent
16 and welded and painted. A lot of things can happen
17 after the fact and, yet, it was made of flat bar.

18 And this is an area where I think the jury
19 might be confused. It might need some understanding of
20 the significance of the language "made of."

21 Counsel said, well, the specification is the
22 basis for defendants' construction. The basis is in the
23 claim language. The term, the words "made of." And that
24 indicates we're talking about the raw material used to
25 make structure, not the state it's in at the end of the

1 day.

2 **THE COURT:** Okay. All right. Thank you.

3 And I don't have anything further for you. Let me just
4 ask, having heard that, Mr. Keeler, do you believe we
5 have any dispute here?

6 (Counsel confer.)

7 **MR. KEELER:** Your Honor, I think hearing
8 defense counsel's explanation, right there, we don't
9 know what the prior art that they're talking about is.
10 We don't know how it was bent or when or -- that's
11 something that we just don't know. So...

12 **THE COURT:** Okay. Tell me if this is right.
13 If what the defendant says they're worried about is an
14 argument about whether or not after something is
15 finished being made, could it be bent as opposed to the
16 thing that was the starting point. It sounds like
17 you're not prepared today to, like, engage in a
18 discussion of, like, let's talk about the extrinsic and
19 intrinsic evidence, about items after they're finished
20 the making process and whether they can be or can't be
21 bent pursuant to what the patent says. Because your
22 view was we're talking about the starting point here.
23 That's what's the issue with this term; is that fair?

24 **MR. KEELER:** Yes, Your Honor.

25 **THE COURT:** All right. Let me -- we'll leave

1 it there, then. Thank you.

2 So what I will say about Term 3 is that after
3 hearing the parties discuss this and, hopefully, it will
4 be reflected by the transcript, it is not clear to me
5 that the parties have an 02 Micro dispute about the
6 meaning of this claim term.

7 An 02 Micro dispute would require that the
8 parties have a fundamental disagreement about the claim
9 scope at issue here. And it's not clear to me that the
10 parties have such a disagreement. I'm not sure how we
11 got to this point because we should never get to this
12 point without having an understanding of that.

13 But I understand defendants' view to be that
14 its concern is, and what's driving this proposed disputed
15 portion of its construction is the term "made of flat
16 bar," is the concern that the plaintiff takes the view
17 that something cannot be made of flat bar after it is
18 made, during the making process, it is bent.

19 And defendants' view is what the term is
20 talking about and means is that the starting point, the
21 input for the making process is flat bar, and everyone
22 agrees that flat bar, when we start, is something that
23 meets the common portion of the parties' proposed
24 constructions, that it is a flat piece of steel with a
25 largely rectangular cross-section.

1 On the other hand, plaintiff doesn't disagree
2 that the starting point on the thing that we utilized to
3 make the portions of the sidewall stiffness issue is, in
4 fact, a flat piece of steel with a largely rectangular
5 cross-section. The parties are in agreement on that.

6 Does the plaintiff think that something can't
7 be made of flat bar if, after the making begins or when
8 it ends, it's bent?

9 Frankly, plaintiff said everything about that
10 today. But, in the end, based on what it said, I don't
11 hear it clearly saying that it is taking a contrary view
12 of the defendant.

13 So I'm not convinced today that there is any
14 kind of 02 Micro dispute.

15 Now, if at some point later in this case,
16 someone on the plaintiff's side starts telling me we do
17 have a dispute about this; we have a disagreement about
18 claim scope of the type defendant was trying to raise
19 here, and it's a circumstance, which I think it is, where
20 the defendant did raise that concern in their first
21 brief, plaintiff just ignored it, didn't discuss it, and
22 even today wasn't prepared to address it, really, I'm not
23 making any statement about whether such a position later
24 taken would be waived or forfeited. So it may well be, I
25 don't know.

1 But all I'm saying is for today's purposes, in
2 light of the record we have, I don't have a record to
3 indicate that there is an *02 Micro* dispute about the
4 meaning of the claim term, whether that claim term is
5 "flat bar" or "made of flat bar" because I understand the
6 parties both to agree that "flat bar" means a flat piece
7 of steel with a largely rectangular cross-section. And
8 that the impetus giving rise to the defendants' proposal
9 from "made of flat bar" may not be one that is ultimately
10 disputed here.

11 If I had to guess, I think it's not disputed.
12 So I'm not going to construe the term. I don't think
13 there's a reason to construe it at this point.
14 Otherwise, we will leave it there with regard to Term 3.

15 So I will make it that we have two claim terms
16 at issue that need to be construed. Just in terms of the
17 Court's plan, my hope is -- the plan will be -- of
18 course, famous last words, so if this doesn't happen then
19 something else has happened with us, and don't hold it
20 against me.

21 But the plan will be that having discussed all
22 this, having spent time on it, we will try to issue
23 constructions of these terms relatively quickly. The
24 idea will be, probably see them come out one, then the
25 other. My hope is that that will happen within the next

1 week or so. So the parties will have, at least from me,
2 claim constructions about these two key terms with some
3 explanation as to why it is I have gone one way or the
4 other. Okay?

5 So that's our plan, it is to give you a heads
6 up about that. Okay? All right. So before we conclude
7 and go off the record, let me just ask, is there any
8 other thing from a procedural perspective we need to
9 address before we do so?

10 On plaintiff's side?

11 **MR. KEELER:** No, Your Honor.

12 **THE COURT:** On defendants' side, Mr. Murray?

13 **MR. MURRAY:** No, Your Honor.

14 **THE COURT:** Okay. Let me just ask counsel to
15 stick around for a second after we go off the record
16 because I want to get their views on just some general
17 thoughts about claim construction.

18 But for our staff here, we will go off the
19 record and end our hearing here today with thanks to
20 counsel and to our Court staff as well. All right.
21 Thank you.

22 (The proceedings concluded at 2:09 p.m.)
23
24
25

CERTIFICATE OF COURT REPORTER

I hereby certify that the foregoing is a true and
accurate transcript from my stenographic notes in the
proceeding.

/s/ Bonnie R. Archer
Bonnie R. Archer, RPR, FCRR
Official Court Reporter
U.S. District Court

EXHIBIT 6

Automated Redline Tracking Changes from '892 Patent Claims 1, 3–4, and 6–7 to '515 Patent Claims 40–44

~~'892'~~'515 Patent Claim 140:

~~1. . . .~~

~~40. . . .~~

. . . a respective side sill and a top chord;

said first ~~upstanding sidewall extending~~side wall extends from said side sill to said top chord;

said first ~~upstanding sidewall having~~side wall has a predominantly upwardly running sidewallside wall stiffener mounted thereto, said sidewallside wall stiffener being located at a longitudinal station intermediate the trucks;

said first ~~upstanding sidewall~~side wall having a first region, said first region being a lower region thereof;

said first ~~upstanding sidewall~~side wall having a second region, said second region being an upper region thereof;

said sidewallside wall stiffener having a first portion, said first portion being a lower portion thereof;

said first portion being mounted to said first region of said first ~~upstanding sidewall;~~side wall;

said sidewallside wall stiffener having a second portion, said second portion being an upper portion thereof, said second portion being mounted to said second region of said ~~first upstanding sidewall;~~side wall;

said first portion of said first ~~upstanding sidewall~~side wall stiffener being laterally outboard of said first region of said first ~~upstanding sidewall;~~side wall;

said second portion of said sidewallside wall stiffener being laterally inboard of said second region of said first ~~upstanding sidewall;~~side wall;

said ~~first sidewall~~side wall having a continuous section between said first and second regions thereof; and

said sidewallside wall stiffener having web continuity between said first and second portions thereof.

~~'892'~~'515 Patent Claim 341:

341. The ~~rail road~~railroad hopper car of claim 240 wherein said first and second portions of said sidewallside wall stiffener are substantially co-planar, and are substantially vertically aligned when seen in a sectional view looking along the car.

~~'892'~~'515 Patent Claim 442:

442. The ~~rail road~~railroad hopper car of claim 241 wherein said first ~~upstanding sidewall~~side wall has a third region intermediate said first and second regions, said third region including a

side sheet transition portion passing across said ~~sidewall~~side wall stiffener from an inboard margin thereof to an outboard margin thereof, and said stiffener having vertical web continuity through said transition portion.

~~'892'~~515 Patent Claim 643:

643. The ~~rail-road~~railroad hopper car of claim 240 wherein:

said first ~~upstanding-sidewall~~side wall has a third region intermediate said first and second regions, said third region including a side sheet transition portion passing across said ~~sidewall~~side wall stiffener from an inboard margin thereof to an outboard margin thereof;

said hopper includes first and second sloped side sheets; and

said first sloped side sheet meets said first ~~sidewall~~side wall at said transition portion.

~~'892'~~515 Patent Claim 744:

744. The ~~rail-road~~railroad hopper car of claim 643 wherein said first ~~sidewall~~side wall has an overall height from said ~~first~~-side sill to said ~~first~~-top chord, L, and said ~~first sloped side sheet meets said~~ transition portion at an height is located a distance above said side sill that is in the range of 1/4 to 2/3 L ~~above said first side sill~~.

EXHIBIT 7

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

NEC CORPORATION,)	
)	
Plaintiff,)	
)	
v.)	Civil Action No. 22-987-CJB
)	
PELOTON INTERACTIVE, INC.,)	
)	
Defendant.)	

MEMORANDUM ORDER

1. The Court, having reviewed Defendant Peloton Interactive, Inc.’s (“Defendant”) motion to stay pending *inter partes* review (“IPR”) (the “Motion”), (D.I. 182), having reviewed the parties’ letter briefing, (D.I. 183; D.I. 184; D.I. 189), and having considered the three stay-related factors, hereby ORDERS that the Motion is GRANTED and the case is STAYED for the following reasons.

2. With regard to the “simplification of issues” factor, it is admittedly a mixed bag. On the one hand, there are some reasons why a stay might not simplify things to a great degree. For example, because one of the three asserted patents (the '809 patent) is not at issue in the pending *inter partes* review (“IPR”) proceedings, no matter what happens with the other two asserted patents (the '101 and '427 patents) in those proceedings, we will be proceeding forward at some point in this case on at least one patent. Additionally, since there are real similarities between the '809 patent and the '101 patent (as the Court will explain further below), then it is likely that a good chunk of the discovery that would be needed in a three-patent case might still have to happen in an '809 patent-only case. Moreover, if all of the asserted claims of the '101 and '427 patents are not invalidated after the IPR proceedings conclude, then there will still be a

lot to do here pre-trial as to the remaining claims as to those patents. All of these considerations suggest possible limits to the efficacy of a stay.

3. However, there are a bunch of reasons why a stay could meaningfully simplify the instant proceedings—enough reasons that, in the Court’s view, the “simplification” factor slightly favors a stay overall. To begin, the fact that all of the asserted claims of the '101 and '427 patents are at issue in the IPR is important, for at least three reasons. First, this means that the case would become significantly smaller in scope should Defendant prevail on its IPR-related invalidity challenges as to most or all of those patents’ asserted claims. And a smaller case will surely result in less work to be done by the Court and the parties. As just one example, five of the 11 disputed claim terms relate exclusively to the '101 or '427 patents (with a sixth term found in both the '101 and '809 patents); at least some of those claim construction disputes would become moot if the claims of the '101 and/or '427 patents were invalidated. (*See* D.I. 137; D.I. 183 at 2) Second, with different inventors on each of the three asserted patents, certain inventor depositions would not need to occur if the claims of the '101 and/or '427 patents are invalidated. Third, efficiencies will be gained via estoppel as to certain defenses, even if some claims from one or both of the '101 and '427 patents survive.

4. Beyond this, a stay might bring some benefits even as to the not-in-IPR '809 patent. That is because there is real overlap between the '809 patent and the '101 patent. (D.I. 183 at 2) Although the two patents are not formally related, Plaintiff NEC Corporation’s (“Plaintiff”) own expert explained that “even though the '809 [patent] is a separate patent, it does describe similar technology and uses almost identical words [as the '101 patent].” (*Id.*, ex. 5 at 28) Moreover: (a) Plaintiff’s complaint characterizes the '101 and '809 patents similarly, (D.I. 16 at ¶¶ 25, 48); (b) Plaintiff accuses the same set of media players for both the '101 and '809

patents, (D.I. 183 at 2); and (c) one disputed claim term is found in both the '101 and '809 patents, (D.I. 137 at 12). In light of this similarity between the patents, it seems likely that the parties may take positions in the IPR regarding the '101 patent that could end up impacting the Court's later analysis regarding the '809 patent. And getting the benefit of that input from the IPR proceedings might be helpful in terms of the Court's later work on '809 patent issues—no matter what happens with the asserted claims of the '101 patent in those proceedings.

5. There is one final point about simplification that favors grant of the Motion: Final Written Decisions (“FWDs”) in these IPRs are due on February 7, 2025 and March 4, 2025—shortly before trial is scheduled to begin on March 31, 2025 in this case. This provides for the prospect of a hectic and disjointed pre-trial process if no stay is instituted—were the PTAB to issue its decisions on the eve of trial.

6. In the end, when these “simplification” issues are all weighed together, it seems to the Court that they favor Defendant's position a bit. *Cf. Speyside Med., LLC v. Medtronic Corevalve, LLC*, Civil Action No. 20-361-JLH-CJB, D.I. 155 (D. Del. Sept. 30, 2021) (concluding that there were enough potential simplification gains to warrant a stay as to the entire case, where two of the five asserted patents were not at issue in the IPR, but those patents were closely related to one of the patents at issue in the IPR).

7. As for second “status of the case” factor, at the time of the filing of the Motion: (a) the case had proceeded through a good bit of document discovery, but no depositions had been taken; (b) a *Markman* hearing was held, but no *Markman* decision has issued; and (c) the expert discovery, summary judgment and pre-trial phases were still a ways away. It is true that the Court has done some real work in the case, including addressing a protective order dispute, (D.I. 57), and a discovery dispute, (D.I. 106), resolving a motion to dismiss, (D.I. 108), and

holding the *Markman* hearing, (D.I. 173). But even still, the case is about in the middle of its schedule. A lot of work still remains between now and trial. Thus, this factor is about neutral. *See, e.g., ImmerVision, Inc. v. Apple, Inc.*, Civil Action No. 21-1484-MN-CJB, D.I. 159 (D. Del. Oct. 17, 2023) (concluding the same, in a patent case that was at essentially the same stage as this one).

8. Finally, the undue prejudice factor surely favors a stay. While a stay of the case will mean some delay for Plaintiff, the potential for delay alone does not amount to undue prejudice. *See WSOU Inv., LLC v. Netgear, Inc.*, Civil Action No. 21-1117-MN-CJB, Civil Action No. 21-1120-MN-CJB, 2022 WL 17337924, at *2 (D. Del. Nov. 30, 2022). It is undisputed that the parties are not competitors, (D.I. 183, ex. 12 at 13; D.I. 189 at 2), and Plaintiff will later be able to seek full relief for infringement via a monetary damage award, *see WSOU Inv., LLC*, 2022 WL 17337924, at *2. It is true that Defendant filed its IPR petitions at the end of the statutory deadline, but the Court sees no evidence of gamesmanship here. *Id.* (explaining that filing an IPR petition close to the one-year statutory deadline is not problematic *per se*, because “accused infringers often understandably want to have a good handle on what the scope of the district court litigation will be before they file an IPR petition”). It also seems relevant to the Court that, as Defendant noted in its opening brief, while the asserted patents issued in 2014 and 2017, Plaintiff waited until 2022 to file this case. (D.I. 183 at 3) Plaintiff did not provide a substantive response to this point, (D.I. 184 at 4 n.2), and this timeline could suggest that Plaintiff was not in a big hurry to get this case started.

9. In the end, with the “simplification of issues” factor slightly favoring a stay, the “status of the case” factor being about neutral, and the “undue prejudice” factor favoring a stay, Defendant’s Motion should be granted. The case could be simplified quite a lot via the IPRs.

And the additional wait to get the benefit of that simplification does not seem like it will cause Plaintiff undue harm.

10. Therefore, the Court ORDERS that the case is STAYED pending the issuance of a FWD in each of the respective IPR proceedings. Within five business days of the issuance of a FWD in the last of the IPRs at issue to resolve, the parties shall jointly file a letter, of no more than three single-spaced pages, providing their views as to whether a case schedule should be entered.

Dated: April 9, 2024



Christopher J. Burke
UNITED STATES MAGISTRATE JUDGE

EXHIBIT 8

**U.S. District Court
District of Delaware (Wilmington)
CIVIL DOCKET FOR CASE #: 1:19-cv-01334-CJB**

Midwest Energy Emissions Corp. et al. v. Arthur J. Gallagher &
Co., et al.
Assigned to: Judge Christopher J. Burke
Cause: 35:271 Patent Infringement

Date Filed: 07/17/2019
Jury Demand: Plaintiff
Nature of Suit: 830 Patent
Jurisdiction: Federal Question

Plaintiff

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12/01/2020	248	STIPULATION and Order of Dismissal with Prejudice as to Defendants AEP Generation Resources Inc., Southwestern Electric Power Co., AEP Texas Inc. and Cardinal Operating Co., LLC, by MES Inc., Midwest Energy Emissions Corp.. (Lennon, James) Modified on 12/1/2020 (nms). (Entered: 12/01/2020)
12/01/2020	249	SO ORDERED Granting 248 Stipulation and Order of Dismissal (*Party AEP Texas Inc., Southwestern Electric Power Co., and AEP Generation Resources Inc. terminated). Signed by Judge Richard G. Andrews on 12/1/2020. (nms) (Entered: 12/01/2020)
12/01/2020	250	NOTICE OF SERVICE of Plaintiffs' Second Amended Section 7.c Disclosures to NRG filed by MES Inc., Midwest Energy Emissions Corp..(Lennon, James) (Entered: 12/01/2020)
12/02/2020		REDACTION NOTICE: In accordance with section G of the Administrative Procedures Governing Filing and Service by Electronic Means, redacted versions of sealed documents shall be filed electronically within 7 days of the filing of the sealed document. The records of this case do not reflect the filing of a redacted version of DI # 243 . (nms) (Entered: 12/02/2020)
12/02/2020	251	REDACTED VERSION of 243 Exhibit 2, by MES Inc., Midwest Energy Emissions Corp.. (Lennon, James) Modified on 12/3/2020 (nms). (Entered: 12/02/2020)
12/02/2020	252	Submission of Subsequent Information re 234 MOTION to Stay the Case Pending Inter Partes Review, by Brandon Shores LLC, H. A. Wagner LLC, Midwest Generation EME, LLC, Midwest Generation, LLC, NRG Energy, Inc., NRG Texas Power LLC, Talen Energy Corporation, Talen Generation LLC (Attachments: # 1 Exhibit N, # 2 Exhibit O, # 3 Exhibit P, # 4 Exhibit Q, # 5 Exhibit R)(DiGiovanni, Francis) Modified on 12/3/2020 (nms). (Entered: 12/02/2020)
12/09/2020		Minute Entry for proceedings held before Judge Christopher J. Burke - Telephonic Motion Hearing held on 12/9/2020 regarding D.I. 234 MOTION to Stay the Case Pending Inter Partes Review filed by Midwest Generation EME, LLC, H. A. Wagner LLC, Midwest Generation, LLC, Southwestern Electric Power Co., NRG Energy, Inc., Brandon Shores LLC, AEP Generation Resources Inc., Talen Generation LLC, NRG Texas Power LLC, Talen Energy Corporation, AEP Texas Inc. The Court heard argument from the parties and took the motion under advisement. (Court Reporter Jennifer Guy. Clerk: M. Crawford) Appearances: V. Schad, J. Nemunaitis for Plaintiffs; F. DiGiovanni, S. Fareed, T. Rahmeier, D. Tobin for Talen Defendants; T. Cragg, E. Flannery, A. Dhanani, T. Carter for NRG Defendants;B. Egan, J. Evall and R. Mark for Refined Coal Defendants; and N. DiSalvo, D Nemec for CERT Defendants. (mlc) (Entered: 12/09/2020)
12/10/2020	253	ORAL ORDER: The Court, having reviewed the Talen and NRG Defendants' (the "Moving Defendants") Motion to Stay the Case Pending Inter Partes Review, ("motion"), (D.I. 234), and the parties' briefing and submission of subsequent information related thereto, (D.I. 235; D.I. 241; D.I. 246; D.I. 252), having heard argument on December 9, 2020, and having considered the three stay-related factors, hereby ORDERS that the Motion is GRANTED and Plaintiffs' patent infringement claims against the Moving Defendants with respect to the asserted patents (United States Patent Nos. 8,168,147 ("147 patent"), 10,343,114 ("114 patent"), 10,589,225 ("225 patent"), 10,596,517 ("517 patent") and 10,668,430 ("430 patent" and collectively with the '225 patent and the '417 patent, the "newly-asserted patents")) are STAYED until at least final written decisions have been entered regarding Moving Defendants' inter partes review ("IPR") petitions that have been instituted against the '114 patent and the '147 patent. As to the '114 patent and the '147 patent, the motion is not difficult. With respect to the "simplification" factor, nearly all asserted claims (but for two dependent claims asserted against the NRG Defendants) are at issue in the IPR proceedings. Thus, there is a very good chance that the

parties and the Court could engage in a significant amount of pre-trial work, only to have the PTAB end up invalidating nearly all asserted claims (or otherwise issuing decisions that will have a significant bearing on the patent infringement claims in this matter, including regarding the priority date of the '114 patent). (D.I. 235 at 9-11; D.I. 246 at 2-4) With respect to the "stage of the litigation" factor, this case is in its early stages. There have not yet been any depositions; claim construction briefing is not set to begin until March 2021 with the Markman hearing scheduled for July 2021; opening expert reports are due in April 2022 and a first trial is set for January 9, 2023. (D.I. 235 at 11-12; D.I. 246 at 4-6; see also D.I. 140) With respect to the "relationship between the parties" prong of the "undue prejudice" factor, the Moving Defendants do not directly compete with Plaintiffs, and the case is currently already stayed against the other Refined Coal Defendants (with the Court having previously found that Plaintiffs showing of harm with respect to those Defendants was "not robust"). (D.I. 235 at 13; D.I. 166) And the other subfactors with respect to "undue prejudice" also support a stay, with: (1) Moving Defendants' IPR petitions having been timely filed; (2) the instant motion having been filed promptly after the PTAB issued its institution decisions with respect to the '114 patent; and (3) the IPR proceedings now underway with respect to both the '114 patent and the '147 patent. (D.I. 235 at 12-14; D.I. 246 at 6-8) The only difficult wrinkle with respect to the motion is whether a stay of the entire case makes sense, in light of the fact that there are five asserted patents at play here, including the three newly-asserted patents for which IPR petitions have not yet been filed (in light of the applicable statutory waiting period of nine months from the date of the grant of a patent). (D.I. 235 at 12) But for the following reasons, a stay of the entire case as to the Moving Defendants makes sense, even though no IPR has yet been instituted on those three newly-asserted patents: (1) All five asserted patents are from the same patent family, share the same title, share the same inventors, relate to similar technology and are asserted against the same infringing conduct. (D.I. 130 at paragraphs 237, 270, 304, 333, 362; D.I. 235 at 7; D.I. 246 at 2-3); (2) Even Plaintiffs have acknowledged that, in light of this, there is significant overlap among the patents (i.e., with regard to relevant claim terminology, relevant witnesses, etc.). Indeed, during oral argument, Plaintiffs' counsel admitted that in light of such overlap, it would be complicated to stay the case only as to the '114 patent and the '147 patent but not as to the newly-asserted patents.; (3) Further, it is reasonable to expect that there will be arguments made and decisions issued regarding claim scope, claim construction, and invalidity issues in the IPR proceedings for the '114 patent and the '147 patent that will have an impact on the newly-asserted patents. (D.I. 235 at 9-10; D.I. 246 at 2-4); (4) Moreover, Moving Defendants have confirmed that they intend to promptly file IPR petitions with respect to the newly-asserted patents following the expiration of the statutory waiting periods, and that prior art that is at issue in the '114 patent and the '147 patent IPR proceedings will also be put at issue with regard to these to-be-filed IPR petitions; and (5) If it turns out that the PTAB does not institute IPR on some or all of the newly-asserted patents, Plaintiffs would of course be free to update the Court regarding that and to move to lift the stay, if they believe that is warranted. Accordingly, the case is STAYED as set out above. Additionally, the parties shall jointly notify the Court by letter within 10 days after any of the following events occurs: (1) Moving Defendants file IPR petitions with respect any of the newly-asserted patents; (2) the PTAB issues institution decisions with respect to any of those patents; and (3) the PTAB issues Final Written Decisions with respect to the IPR proceedings for either of the '114 and '147 patents. The parties shall also submit a joint status report on the IPR proceedings 90 days after entry of this order and every 90 days thereafter. (D.I. 235 at 15). Ordered by Judge Christopher J. Burke on 12/10/2020. (dlb) (Entered: 12/10/2020)

12/10/2020

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ORAL ORDER: In light of the stay of the case entered as to the Talen Defendants and the NRG Defendants, the Court hereby ORDERS as follows: (1) By no later than December 16, 2020, Plaintiffs and the Defendants that did not move for a stay of the case pending